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ARTICLE III.

HISTORICAL SKETCH
OF THE
ORIGIN AND PROGRESS
OF THE
MASSACHUSETTS MEDICAL SOCIETY.

By EBENEZER ALDEN, M. D.,
Fellow of the Society.

[Read at the Annual Meeting, May 30, 1838.]

Mr. President and Gentlemen:

We are assembled in circumstances of peculiar interest. Since the last annual meeting, sixty-five gentlemen have accepted the fellowship of the Society. At no former period have accessions been so numerous; nor has a more commendable zeal among the members ever been manifested to advance the interests of the profession. With two schools of medicine, favorably situated to give instruction to students resident in every part of the Commonwealth; —with a General Hospital and Asylum for the Insane, and a State Lunatic Asylum, models among similar institutions, and each a monument to the enlightened enterprise of the government, and to the philanthropy of their respective founders;—with numerous local establishments, public and private,

for the relief of the various forms of disease to which humanity is incident;—with a weekly press devoted to medical intelligence;—above all, with a spirit of wakeful inquiry among the members of the profession, and with such a state of harmony, as excludes the pursuit of selfish, sordid interests; it may safely be affirmed, that the prospects of usefulness to those who practise the healing art, and of the rapid advancement of medicine, as a science, were never so flattering in this Commonwealth, as at the present time.

We have reason for special congratulation, also, that the last obstacle in the way of the honorable admission to our Society of every respectable member of the profession in the community, was happily removed by a vote of the last year, which conferred the same privileges and immunities on graduates of the Berkshire Medical Institution, as had previously been enjoyed by medical graduates of Harvard University and by our own licentiates. This object had been earnestly, but ineffectually, sought from the first establishment of the western school. Although the most implicit confidence was reposed in the fidelity and thorough instruction of the present incumbents of the several professorships, still it was the opinion of the majority of the Society, that in consequence of a material defect in the charter of that Institution, there was no sufficient guaranty, that unworthy applicants would be uniformly excluded from participating in its honors by those who should succeed them. In other countries, not to say in our own, medi-

cal degrees have sometimes been conferred on persons possessing very inadequate qualifications for the discharge of the responsible duties of the profession. The Society, therefore, charged as it is by the laws of the Commonwealth, with the duty of prescribing "such a course of medical and surgical instruction, and such qualifications, as they shall judge requisite for candidates for the practice of physic or surgery,"* felt it to be an incumbent obligation, to guard the avenues to the profession, and to avoid any course which, however desirable on some accounts, would be liable, if pursued, to be misconstrued into a dangerous precedent, and thus eventually to defeat one of the main purposes of its organization. By an act of the Legislature, passed April 1, 1837, these difficulties were removed by the appointment of an independent Board of Overseers, invested with similar powers and authority in relation to the Berkshire Medical Institution, as belong to the Overseers of Harvard University, with respect to the medical department of that college: and the Society lost no time in responding, in a manner alike honorable to themselves and to the Institution in question. The resolution, unanimously and cordially adopted on that occasion, is adapted to promote and to perpetuate harmony among the members of the profession, scattered, as they are, over a wide extent of territory, and thus greatly to increase the facilities for accelerating the progress of medical science.

The benefits of medical association are not yet

* Revised Statutes, Chap. 22, Sect. 1.

fully appreciated by the public, and perhaps not to their full extent, by the members of the profession. It is only when the energies of man are concentrated and united with those of his fellow-man, that he is able to accomplish most in a worthy cause. If the progress of medicine during the last half century has been rapid in this vicinity beyond any former parallel, this result has been produced chiefly by more cordial efforts among its professors to effect it during that period than before; and, if in time to come, medical science is to advance in correspondence with other departments of literature,—union, a free interchange of opinions and earnest cooperation, alone will achieve it.

It is a great mistake, to suppose that the benefits of medical association are limited, or even chiefly important, to the medical profession. There are duties which every practitioner owes to the individuals who seek his advice and confide in his skill; for the faithful performance of these, he alone is responsible. There are other duties, of a public nature, which belong to the profession in their associate, rather than in their individual, capacity. With reference to these the Massachusetts Medical Society was originally constituted. In granting a charter, obligations were imposed, as well as privileges conferred. Have the ends of the institution been attained? and have the reasonable expectations of the Legislature and of the public been realized? This inquiry is supposed to be peculiarly appropriate at the present time, and to this your attention is now respectfully invited. In

prosecuting it, it is proposed to present a sketch of *the origin and progress of the Society*, so far as may be necessary in exhibiting some of the leading objects of its organization, and the practical influence that has resulted from the course of measures which have been adopted in securing them.

In all communities individuals may be found, who seem unable to appreciate the value of an object which promises no peculiar advantage to themselves. It is not strange, that such persons should be reluctant to admit that other individuals may be influenced by motives which transcend the limits of their own consciousness and experience. Hence association has been, not unfrequently, considered, as only another name for monopoly; and prejudice, if not hostility, has been awakened against the most philanthropic efforts and the most valuable public institutions. The principal design of the present investigation is, to show that the objects to which the Society has directed its attention are of great public utility; and that whatever of patronage or of reputation it has attained, has been fairly earned and worthily bestowed. One fact, it is believed, will be evident, in the progress of these remarks, and it cannot fail of being duly appreciated by members of the profession not yet associated, and by the public; whenever the Society has at any time petitioned the Legislature for an alteration of their charter, it has not been for the purpose of securing exclusive privileges to the members, but rather that they might diffuse the benefits of medical association more extensively in the community.

MEDICAL EDUCATION.

A leading object under the charter, and one to which the Society has ever devoted the most assiduous attention, is, to elevate and to fix, on a permanent basis, the standard of medical education: in other words, to provide a succession of well-educated physicians and surgeons, adequate to the wants of the community.

To appreciate what has been done in the prosecution of this object, it must be recollected, that from the settlement of the country in 1620 to the time when the Society was organized in 1781, a period of more than 160 years, no systematic effort whatever had been made in New England to raise the standard of medical education, or to regulate the practice of medicine. A few able and highly respectable physicians, educated chiefly in foreign countries, were to be found in the larger towns; but in general, the profession was in a state of extreme degradation. The process of induction, in numerous instances, was something like the following;—A young man, who, from choice, ill health, or aversion to other pursuits, was desirous of being initiated into the "arts and mysteries" of healing the sick, commenced operations by pursuing the Latin Grammar, under the direction of the parish minister, as far as the first personal pronoun: he next apprenticed himself for a few months, more or less, as suited his fancy or convenience, to some neighboring practitioner; and with this slight preparation, entered upon

the discharge of his responsible duties. No examination was had, nor was any license given or required. In some cases, a certificate was proffered by the instructer to the pupil at the expiration of his apprenticeship, but even this ceremony was often dispensed with. A skeleton, in those days, was a rare acquisition, and a human dissection created as much consternation among the people, as the appearance of a meteor. If the body of a malefactor was occasionally obtained for dissection, very little use was made of it, except boiling it in some obscure place for the sake of preserving the bones. Up to the close of the last century, Cheselden's compendium, with the small plates connected with the octavo edition, was the only text-book of anatomy used by many physicians in educating their pupils; and it was gravely contended, that a knowledge of anatomy was of little importance to a physician, whatever might be the case with respect to the practice of surgery. "Medical libraries had no existence" (in this country), and the few eminent men who had been educated abroad, demanded from students a compensation (often one hundred guineas), which far surpassed the means of those who expected to practise for ninepence the visit. In the metropolis, one shilling and sixpence, and afterwards two shillings, was the customary fee for an ordinary visit, until during the time of a general depreciation of the currency towards the close of the revolutionary war, an association of physicians who were accustomed to hold their meetings at the Green Dragon

tavern, and were sometimes denominated the Green Dragon Club, raised it to three shillings. Up to the period of the formation of the Society, no public attempt has been made in New England to communicate medical instruction, if we except a course of lectures by Dr. William Hunter, an eminent physician and surgeon in Newport, R. I., in 1754, and the two succeeding years, and a short course of anatomical demonstrations in Boston, by Dr. John Warren, in the winter of 1780.

As an anatomist, Dr. Warren was self-taught, but it should be added, he was well taught. His talents as a lecturer were of the highest order of excellence. He possessed a happy faculty of communicating to others the results of his own original investigations, and of infusing his spirit into every subject which claimed his attention. His enunciation was rapid, yet distinct; his voice clear and musical, and of sufficient compass to be heard without effort in any part of a large assembly. His manner was deeply impressive; and with all the lights of modern science, it is rare to find an individual equally able, at his pleasure, to enchain the attention, and carry away the feelings of an audience.

To this gentleman, and a few others of a kindred spirit, the Society is indebted for its origin. In the progress of the arduous struggle for independence, the want of a competent number of well-qualified physicians and surgeons was severely felt. The Hon. Samuel Holten, an enterprising physician in Salem village, now Danvers, took a noble and de-

cided part in behalf of his country, and early relinquished private practice, that he might more effectually subserve her interests. He was a member of the provincial Congress at Watertown, where he was a member of a Medical Board for the examination of candidates for the departments of medicine and surgery in the army. In 1777, he was one of the delegates from Massachusetts, who assisted in framing the confederation of the United States; in 1778, a member of Congress, and one of the original signers of the Constitution. For more than a year, being the only medical gentleman in Congress, "to him chiefly was committed the charge of the medical department of the army."* Such a man, in such circumstances, would not fail to perceive the indispensable necessity of adopting some efficient measures for the promotion of medical education.

Dr. Warren, as his biographer* informs us, relinquished his business at Salem, immediately after the memorable battle of Bunker hill, and, guided on his way by the blaze of Charlestown, reported himself at head quarters. In the ardor of his patriotism, he appeared with his gun and knapsack, prepared to enter the ranks as a common soldier. Other destinies, however, awaited him. He was immediately appointed a hospital surgeon, in which capacity he followed the fortunes of the army until 1777, when he was stationed in Boston, as superintendent of the military hospitals; an office which he continued to

* Dr. Thatcher's Medical Biography, art. Holten.
† James Jackson, M. D.

hold, with honor to himself, and advantage to his country, until the peace of 1783.

And is it possible, that a Society, originated by such men, is a monopoly? Is it an institution for the benefit of the few, with little regard to the public interests? Were Holten and Warren influenced by sordid motives;—men, who voluntarily relinquished lucrative employments and the joys of home, that they might aid in securing an honorable independence for their country? With them were associated the venerable Holyoke, Baylies, Tufts, Rand, Lloyd, Danforth, Dexter and others, who, if they were not all equally distinguished as patriots, were many of them possessed of wealth, at the head of the profession, and devoted to its interests. To exclude merit, or to degrade the profession of their choice, was no part of their design. Having just emerged from physical vassalage, they were desirous of uniting with eminent men of other callings, in establishing the empire of mind, and, through this instrumentality, to assist in laying the foundations of the future prosperity of their country, broad and deep, on the basis of intelligence and virtue.

On the first of November, 1781, the Society was incorporated; and on the twenty-eighth day of the same month, the charter having been accepted, it was duly organized, by the election of officers, pro tempore, and by the appointment of a committee to draft a code of by-laws. Under these laws, a Board of Censors was chosen, for the examination and license of such candidates as might apply, and the

form of a diploma was agreed on, to be given to those who should be found worthy of the honor. In 1789, the Legislature, by a special act, empowered and required the Society to describe and point out, from time to time, such a course of medical instruction or education, as they should judge requisite for candidates for the practice of physic and surgery, previous to their examination before them, and cause the same to be published. The censors were under oath to the faithful performance of their duty, and any neglect subjected them to a heavy fine.

The immediate consequence of these measures was, that more time than formerly was occupied by students in qualifying themselves for the profession; all who were enterprising, and could possibly defray the expense, sought instruction by attending the medical lectures annually given at Harvard College; new and improved text-books for the use of students were adopted, and a class of young physicians was gradually introduced to business, far better qualified to perform the duties of the profession than those who had preceded them.

The medical department of Harvard University was organized the next year after the incorporation of the Society, and chiefly through the influence of the same individuals. At one period, however, no little collision existed between the Faculty of the College, and the Fellows of the Society, on the subject of conferring medical degrees; nor did it subside, until, by mutual conference and explanations, the Society obtained satisfactory assurances that the

standard of medical education would not be lowered. Then graduates were freely admitted to all the privileges of licentiates examined by its own censors, and the two corporations have since moved forward on terms of reciprocity and good fellowship.

It is a reproach not unfrequently cast on our profession, that few comparatively of its members have availed themselves of the advantages of a public education before engaging in studies strictly medical. In a new country, just struggling into existence, many obstacles prevent young men from pursuing a course exceedingly desirable in itself, which neither their time nor their pecuniary circumstances will permit them to follow; obstacles which cannot be fully appreciated in later times, nor in countries where instruction in every science is abundant, and within reach of all who are desirous of obtaining it. The reproach, however, such as it is, cannot well be attached to our Society. As early as April, 1793, at a special meeting, it was voted that "the Society earnestly recommend a University education to all designed for the medical profession; and to all students in physic an attendance on the medical lectures in the various branches, as taught in the Universities; and as most of the French authors upon physic and surgery have written in their own language, and many of them are very valuable, the Society also recommend a knowledge of that language.

The qualifications required of those who are admitted to practice, under the auspices of the Society,

are "sound mind and good moral character," a collegiate education, or a competent acquaintance with such departments of it as are supposed to hold a special relation to medical pursuits; a three years' course of medical study, under the direction of competent instructers, and a satisfactory examination in all the prescribed branches. And the Society does not receive the diploma of any institution, as evidence of medical qualifications for practice, unless these requisites have been substantially complied with; nor do the Fellows lawfully consult with, aid, or abet those who commence business with less qualifications, or who fail to produce evidence that they possess them.

In consequence of the unwavering adherence of the Society to its original principles of insisting on a thorough and uniform system of education, to entitle any gentleman to be acknowledged as a member of the profession in good standing, and by the honorable cooperation of the medical colleges of the State in the same general views, the standard of medical education has been constantly advancing, not only in this Commonwealth, but throughout New England; and no further action, on the part of the Society, appears to be called for at present, than a strict conformity to the rules already adopted.

Some gentlemen have complained that the rule of the Society, demanding a fee of medical graduates, educated out of the State, on receiving license, while none is required of graduates from the medical colleges within the State, is invidious. The subject was

brought to the notice of the Counsellors, by the Worcester District Society, at their statute meeting in February last, and it was voted to recommend to the Society to rescind the rule. I am happy to add, that, at the present meeting, the recommendation has been promptly complied with; so that no conceivable obstacle remains to the admission of every competent practitioner of medicine or surgery in the State, to fellowship and an honorable standing, aside from his own voluntary neglect seasonably to present his testimonials.

That some such system was necessary, to secure to the community a succession of well-educated and competent physicians, is manifest. On such a subject, the medical colleges in New England could scarcely be expected to act in concert, and if they should do it, they have no authority to prevent private individuals from thrusting upon the community half-educated pupils. Indeed, the necessity is imperious of a chartered institution, acting under the authority of the State, through the agency of which, as is well expressed in the act of incorporation, "a just discrimination may be made between such as are duly educated and properly qualified for the duties of their profession, and those who ignorantly and wickedly administer medicine, whereby the health and lives of many valuable individuals may be endangered, or perhaps lost to the community."

PROGRESS OF MEDICAL SCIENCE.

Another leading object, in the organization of the Massachusetts Medical Society, is, "to increase the stock of medical knowledge, and to render the profession more and more useful to the public."

In the prosecution of this object, the following measures were adopted at a special meeting held for the purpose at an early period, and the principles involved in them have been steadily pursued to the present time.

1. Every Fellow was requested to transmit to the Recording Secretary an account of the diseases most prevalent in his circle of practice, from one stated meeting to another.

2. A correspondence was opened with other bodies, devoted to similar pursuits, in this and foreign countries.

3. A committee was appointed in every county in the Commonwealth, to correspond with respectable physicians and medical associations within their limits respectively, and request the communication of all extraordinary and important cases.

4. Such communications were, if approved, read at the stated meetings, or at extra meetings held for the purpose, and afterwards numbered and filed.

5. From these, the most interesting papers were selected for publication, after due revision by a committee.

6. A committee was appointed to devise ways and means for the further diffusion of medical know-

ledge through the several counties of the Commonwealth.

During the first ten years, the operations of the Society were conducted with vigor. Communications from the Fellows were numerous, so that extraordinary meetings were frequently held for the purpose of considering them. Particular inquiries were instituted, as to the state of the medical profession in the various parts of the Commonwealth, and the most distinguished physicians were elected to the extent which the charter permitted. The venerable Dr. Holyoke, in particular, annually transmitted an account of the diseases of Salem, together with a bill of mortality, state of the weather, &c., besides valuable papers on other subjects. In 1790, the first number of the Society's Communications was published, amounting to 128 octavo pages. It contained the act of incorporation, several original papers on medical subjects, together with an appendix, communicating a variety of interesting extracts from foreign publications. In the introduction, the principal objects of the Society are briefly stated, and the intimate relation which exists between medical association and the progress of medical science is distinctly noticed. The number of Fellows at that time amounted to sixty-seven, and of honorary members to twelve.

During the next ten years, the communications were frequent, and many of them at the time of great value, but the publication was not resumed. Towards the close of that period, unhappy personal

alienations among some of the leading members existed; several of the most active of the founders had deceased or had become too infirm to take part as formerly in the meetings, and the Society languished. From 1794 to 1800, the Treasurer was directed not to call on the Fellows for the payment of their annual assessments.

In the original act of incorporation, it was provided, that the number of members resident in this Commonwealth should be limited to seventy. This provision might have been highly expedient in the infancy of the institution; but, after an experiment of twenty years, it became evident, that the most successful accomplishment of the great objects for which the Society was organized, would be more certainly attained by its repeal. The distinction of physicians into various orders and grades, of an arbitrary character, does not comport with the nature of our institutions, nor is it adapted to promote that harmonious action, which is essential to the most rapid improvement of medical science.

At a special meeting, held in January, 1803, a committee was appointed to take into consideration the state of the Society, and to report such alterations in the institution, as they might judge expedient to be adopted. The result of this measure was an application to the Legislature for an extension of the charter, and in March following, an act was passed, which placed the Society on the liberal and extended basis which it occupies at the present time. A new code of by-laws was

formed; committees were appointed in every county, to report the names of such gentlemen, resident within their limits respectively, as should be thought worthy and desirous of membership; and accessions were numerous and highly respectable. And here it is worthy of particular notice, that the Society did not ask for its Fellows new powers or privileges, but only to be permitted to share those they possessed with the whole body of the worthy members of the profession in the Commonwealth. Surely, in this movement, there is no manifestation of a spirit of monopoly.

DISTRICT SOCIETIES.

To obviate the inconvenience, if not impracticability, of frequent meetings; to promote harmony and to encourage a spirit of inquiry among the members in their respective circles, and to extend, as widely as possible, the benefits of medical intercourse, provision was made, in the act of 1803, that on the application of any five members, the Counsellors may establish, within such districts and portions of this Commonwealth as they shall think expedient, subordinate societies and meetings, to consist of the Fellows of the corporation residing within such districts respectively. They may also appoint censors within such districts, who shall be authorized and empowered to examine and license such candidates for the practice of physic and surgery, as shall present themselves for examination and be approved by a

majority of the censors. The members of such district societies are enjoined to communicate such cases, as may be selected for their importance or utility, and have authority to make their own by-laws, not inconsistent with the regulations of the general Society, to elect their own officers, and to purchase and receive by donation books, philosophical or surgical instruments, or other personal property, and to hold and dispose of the same, exclusive of any authority of the general Society.

Petitions were presented, at an early period, from members in Suffolk, Essex, Worcester, Berkshire, Hampshire, and some other districts, which were granted.

Some of the district societies, formed in consequence of these applications, particularly that in Essex county, went immediately into active operation, and have been highly useful. In other cases, it does not appear that any organization took place after authority was granted. Perhaps no measure could be adopted at the present time, better adapted to promote the progress of medicine, than some plan by which the Fellows, residing within a convenient distance, should be brought together for medical intercourse every month. The usefulness of such associations would be greatly increased by the establishment of libraries in each, embracing a selection from the most valuable medical periodicals of the day, and other works of standard value.

The Society for Medical Improvement in the City of Boston, is an honor to the State. Although of

recent origin, its cabinet contains a rich depository of morbid anatomy, and is constantly accumulating, under the supervision of its judicious managers.

ANNUAL DISSERTATION.

In 1803, a resolution was passed, that a dissertation should be read at the annual meeting, by some member previously appointed. In 1804, that duty was performed by Dr. Rand, senior, and the dissertation was published. In 1806, Dr. Warren presented an interesting view of the mercurial practice in fevers. At that time he declined giving a copy for the press. Some years after, however, it was communicated to the Society in the form of an elaborate treatise, and may be found in the second volume of their Communications.

This measure has proved acceptable to the Society, and has been continued to the present time. [Note A.]

PUBLICATIONS.

In 1806, after an interval of more than sixteen years, the Society resumed its publications. They have now reached to five volumes, of about 500 pages each, and one part of a sixth volume. They consist chiefly of the dissertations delivered at the annual meetings, communications from the Fellows on various topics of interest, and reports of committees. For some years past, the proceedings of the Coun-

sellors and of the Society have been published annually, and distributed to the Fellows.

To awaken interest and elicit communications, in the year 1829, it was voted to offer a premium of one dollar per page, for such communications as should be judged worthy of publication. Several interesting papers were received in consequence of this vote, and were published under the auspices of a committee appointed for that purpose. It may be proper here to add, that since the year 1812, more than twenty volumes of the New England and of the Boston Medical and Surgical Journal have been published; a work, which, although it was undertaken and carried forward by individual enterprise, has from the beginning, been under the editorial supervision of members of the Society, and has been chiefly sustained by them, although open to communications from all respectable sources, and widely circulated beyond the limits of the Commonwealth.

LIBRARY.

In adopting measures for the advancement and diffusion of medical science, great care has been taken by the Counsellors and by the Society, to suggest and employ those only, which were adapted to prove equally beneficial to all the members, in whatever part of the Commonwealth. For this reason, the Library, although valuable, has not been acquired by purchase, but wholly through the generosity of members, and of other public-spirited individuals.

The late Hon. John Brooks, of Medford, and Dr. Francis Vergnies, of Newburyport, each bequeathed to the Society their valuable libraries of medical books. There is a provision in the by-laws, that these books may be loaned to the district societies on application, so that all the members, however remotely situated from the metropolis, may enjoy the benefit of perusing them. It is to be regretted that applications for them are not more numerous. It was an excellent remark of the late Dr. Rush, that the mind of a medical man should always be "in an absorbing state." Observation, without reading, is liable to become superficial; and, when a physician ceases to be a student, instead of doing any thing to promote the advancement of medical science, he degrades himself to the condition of a mere "routiner."

LIBRARY OF PRACTICAL MEDICINE.

Another method recently adopted for the diffusion of medical information, has been the publication of a series of volumes of valuable works, foreign and domestic, under the title of Library of Practical Medicine. This publication was commenced in 1831, and thus far has proved eminently successful. In its bearings and influences, it is worth more to the Fellows, individually and collectively, than the annual assessment twice told. There is an advantage in having the attention of the whole profession simultaneously directed to a particular topic of interest; it is

peculiarly grateful to Fellows who have made some sacrifice to attend the annual meeting, to take with them, on their return, a medical book of sterling value. The importance of this measure can be best appreciated by members of the profession, living remote from medical intercourse and the sources of knowledge, to whom a new work on medicine is a luxury, and one in which their slender means allow them only an occasional indulgence. The invaluable Researches of Louis are to be found in the hands of every member of the Society, unless through gross, personal inattention; and the knowledge of the labors of the French pathologists is not, as formerly, confined to a few gentlemen resident in the cities and larger towns, but is widely diffused through the whole body of the profession. In consequence of this, a spirit of active inquiry and of cautious investigation has been awakened; numerous dissections have confirmed the observations of Louis and his coadjutors, on the subjects of Typhus and Phthisis, and the foundations for future improvement are being laid, broad and deep, on the basis of pathological anatomy and exact analysis.

I am not insensible, that some individuals affect to think and to speak lightly of the labors of the French school, as if they were all expended on diagnosis. It is even said, that they manifest a greater solicitude to confirm a previous opinion by a post mortem examination, than to cure the patient by appropriate remedies; in a word, that the remedial measures they adopt, are either inefficient or expectant.

These objections will have little weight with those who investigate and think for themselves. We may assuredly avail ourselves of the labors of others in acquiring a knowledge of disease, without a sacrifice of our own superior modes of treatment, if indeed they are superior. It is worth the inquiry however, whether, if a more exact method were observed in noticing the effects of remedies, some modes of treatment, now popular, might not fall into disuse, and more successful ones be substituted in their stead. [Note B.]

PHARMACOPŒIA.

At different periods, the Society has expended no small amount of labor to secure a uniform mode of compounding medicines, and to protect the community against the dangers incurred by the use of such as are spurious. At a meeting of the Counsellors, Oct. 3, 1805, a committee was appointed to draw up and lay before them a Pharmacopœia or Formulary, for the preparation of compound medicines, with names affixed to the same, to be called the Massachusetts Pharmacopœia. Drs. Jackson, and J. C. Warren, made a statement of the progress of the committee, in February, 1806, and again in the following June. It was then voted, that fifty dollars should be placed at their disposal, for the purchase of such books as might be needed in the prosecution of the work, and an advertisement was inserted in the public papers requesting members of the profes-

sion to furnish such formulæ, as they might judge useful to be introduced. The pharmacopœia was completed, under the direction of the gentlemen above named, and laid before the Counsellors, in June, 1807. After having been examined and approved, it was ordered to be printed. This, it is believed, was the first work of the kind ever accomplished in the United States.* It was favorably received, here and elsewhere, and was brought into general use. Its leading objects were, to introduce a systematic nomenclature of medical substances, in conformity with the improvements in modern chemistry; to simplify medical prescriptions, by omitting obsolete and useless formulæ of foreign pharmacopœias; to bring into notice several indigenous articles in common use in some of the larger towns; to produce uniformity in the preparation and administration of medicines; in a word, to act as a convenient manual for the physician and the apothecary; and these objects were happily attained. In the following year, Dr. James Thatcher compiled a dispensatory, on the same general plan and arrangement, the manuscript of which was submitted to the Society, and, after having been revised by a committee of the Counsellors, was published in 1810.

On the 2d day of June, 1818, the Society concurred in the measures proposed for a national pharmacopœia, and appointed delegates to assist in preparing it.

* In 1789, the college of physicians in Philadelphia announced their intention of publishing a pharmacopœia, in a circular, which was sent to the Massachusetts Medical Society, and may be seen on their files.

REPORTS ON EPIDEMICS.

Among the most useful of the publications of the Society, have been the Reports, which have been drawn up and widely circulated, during the prevalence of epidemic diseases.

In May, 1798, Dr. Jenner published his Inquiry into the Causes and Effects of the Vaccine Virus, with Cases illustrative of its prophylactic powers, as a Preventive of Small Pox. This work was favorably noticed in Dr. Duncan's Annals, of the same year, and excited great attention not only in England, but also on the continent, and in this country. Early in 1799, vaccine matter was collected, and vaccination was extensively practised in England; and in the spring of 1800 was introduced into Paris, from matter furnished by the London Vaccine Institution.

In July, 1800, Dr. Waterhouse commenced vaccination in this country, with matter obtained from Bristol, England. Soon after, a supply was obtained by Drs. Manning, Jackson, and others. The Medical Society made application in January following, and received fresh virus from the London Institution, and through the agency of its members vaccination was generally introduced, as a public benefit, rather than as a source of emolument to individuals. From that period to the present, no labor nor expense has been spared, by the Counsellors and Fellows, to diffuse the benefits of this noble discovery, and to prevent it from being brought into disrepute by the use of spurious matter, or by an imperfect introduction of

such as is genuine. If the population of the State, at the present time, is but imperfectly protected against the ravages of small pox,—and that this is the case recent painful facts fully attest,—the fault does not lie with the medical profession, certainly not with this Society. As early as June, 1808, an elaborate report of a committee of the Counsellors was presented and read at the annual meeting, and was afterwards published for the benefit of the community. This report was an able one, and the positions of its distinguished author have most of them stood the test of time, and are now received as settled principles. The protective power of vaccination has been attested by an experience of more than forty years. Millions of persons, through its influence, have been preserved from death or disfiguration by one of the most painful and loathsome of human maladies.

In the last report of the national vaccine establishment, in England, signed by the presidents of the colleges of physicians and surgeons respectively, it is stated, "that of more than 70,000 persons vaccinated in descent, with successive portions of matter originally collected by Dr. Jenner, thirty-eight years ago, vaccination has manifested its peculiar influence in all; and that of this number, some hundreds have been subjected to the severest trials, by exposure to small pox in its most fatal form."

Of what avail, however, is a remedy, if it be not applied at all, or applied too late? It is well known that certain eruptive diseases, and probably some

others, render the body insusceptible for the time of an effectual vaccination. It is, therefore, important, —perhaps it should be said essential,—to the public safety, that the operation should be entrusted to none but skilful hands. This is the more necessary since the repeal of former laws, which made it incumbent upon the municipal authorities to remove those persons, who were laboring under small pox, to hospitals remote from human dwellings. The law itself was of little use, and in some cases positively injurious, inasmuch as it induced persons to rely upon it for protection, to the neglect of vaccination, the only adequate remedy. The repeal, therefore, was expedient and highly proper, and had the full sanction of the Society; nevertheless, the public should understand that there is no place in the community safe from the ravages of the small pox, and no protection against its dangers, except by a general vaccination, under the inspection of persons competent to conduct it in a suitable manner.

SPOTTED FEVER.

In March, 1806, a disease of a peculiarly fatal character appeared at Medfield, in this State, a description of which, by Drs. Danielson and Mann, was published in the second volume of the Society's Communications. In succeeding years, it extended in various directions. In 1810, it broke out with great violence in Worcester county, and was present simultaneously in not less than sixteen towns. In

March of that year, the Counsellors, at a special meeting, appointed a committee to investigate the causes, history and mode of treatment of the disease, which was familiarly known as the "petechial" or "spotted fever." In performing this duty, a circular was addressed to every Fellow of the Society, and to other reputable physicians in whose vicinity it had prevailed, requesting such information as they might be able to communicate in relation to it. Letters in reply were received from twelve gentlemen, all Fellows of the Society, and an able report, extending to 128 pages, was prepared, published and distributed, at the expense of the Society.

This report presented a history of the disease, an account of its symptoms in different years and localities, together with suggestions as to the appropriate treatment, and was at the time a document of great value. Before the appearance of this pamphlet, the treatment had been in many places empirical, and of course, in those instances, prejudicial. Active stimulants, opium, brandy and steaming, were too often indiscriminately used, and it was the opinion of intelligent and cautious observers, that not a few of the individuals attacked died of the remedies, rather than of the disease. After a full and careful investigation, it turned out, as might have been anticipated, that the disease was a highly congestive form of fever, varying exceedingly in its type, in different places and seasons, and requiring, like other forms of fever, an eclectic rather than a specific mode of treatment.

SPASMODIC CHOLERA.

The doings of the Society, before and during the prevalence of the epidemic cholera in this country, in 1832, are too recent to require an extended notice. At the February meeting of the Counsellors in that year, the following preamble and resolves were adopted, viz.:

"Whereas the disease, called the Epidemic or Spasmodic Cholera, has prevailed in various parts of Asia and Europe, and may hereafter appear on this side of the Atlantic Ocean, so that it is expedient that the physicians of this country should be prepared to meet this disease; therefore,

"*Resolved*, I. That a committee of seven be chosen by the Counsellors of this Society, whose duty it shall be to investigate the history of this disease, and especially the best mode of treating it; and carefully and without prejudice to consider whether it be or be not a contagious disease.

"II. That the sum of thirty dollars be appropriated to defray any such expenses for the purchase of books, as may be thought necessary by the committee.

"III. That this committee be authorized to make public the result of their deliberations, at the expense of this Society, at any period they may think most conducive to the public good."

In May following, the Report, a volume of 190 pages, was put to press. By awakening public attention, and causing the necessary precautions to be

taken before the onset of the disease in this country, this publication was instrumental in preventing the panic which would otherwise have been produced, and the number of deaths was comparatively few, and chiefly among a class of persons, whom no dangers can deter from yielding themselves willing victims to depraved passions and appetites.

It is perhaps proper to add, that most, if not all the reports which have been referred to, are understood to have been drawn up by the same individual,* a gentleman to whose indefatigable industry and entire devotion to the interests of the profession, more than to any other person, the Society owes its prosperity, and the high and honorable standing it has attained.

In presenting even a sketch of the operations of the Society, it appeared necessary to allude to the foregoing facts, in order to repel the unjust imputation, that they have always been of a character adapted to promote the interests of the profession, rather than those of the community. The truth is, the Society has never declined to engage in any enterprise of public utility, appropriate to its organization, because it would involve labor, sacrifice or expense on the part of its members. If further proof were wanting, it would be only necessary to allude to a recent vote, offering a premium of five hundred dollars for discovering a successful mode of rearing leeches having a foreign origin.

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* James Jackson, M. D.

LEGALIZING THE STUDY OF ANATOMY.

Perhaps the importance of medical association to the public good cannot be better illustrated, than by referring to the success which has crowned the labors of the Society in its efforts to secure the legalizing of the study of anatomy. It was the remark of an eminent statesman, that most great conceptions are simple. The passage of a law, legalizing anatomy, is apparently an affair of very small importance; yet, in its remote influences, it is adapted to lengthen the mean term of human life, and to relieve an untold amount of human suffering. It is only about thirty years, since it was seriously doubted whether a limb could be preserved, provided the principal artery should be tied, and few surgeons, comparatively, could be found bold enough to venture upon the operation. And yet, it is a very simple operation, is attended with but little hazard, and requires but a moderate share of skill in its performance, for a person well acquainted with the anatomy of the parts. Hundreds of persons also in this country, no doubt, have died from strangulated hernia, who might have been saved by the timely performance of an operation by no means difficult.

At a meeting of the Counsellors, in February, 1829, a proposition was introduced, that a committee should be appointed to prepare a petition to the Legislature, asking for a modification of the laws then existing, which prohibited the procuring of subjects for anatomical examination, and report the same to the

Society for consideration at the annual meeting. The proposition was sustained. At the annual meeting in June following, the committee reported, that they had prepared a petition to the Legislature, as directed by the Counsellors; but as the subject was beset with difficulties, and of vast importance to the community; and as time and effort would be required to prepare the public mind for so great a change as was contemplated, they recommended the appointment of a large committee, to whom the whole subject should be referred, with instructions to consider what measures it would be expedient to adopt, and to report to the Counsellors in October following. The committee issued a circular to the Fellows on the subject, and the Counsellors, at their meeting in October, appropriated one hundred and fifty dollars for its distribution, not only to the Fellows, but to other intelligent and influential individuals. Subsequently, a large edition of the Report was widely circulated, and a petition was presented to the Legislature. In June following, the subject was favorably noticed by the Governor, in his opening message to the Legislature, and the petition was referred to a committee, who, after a patient hearing, reported favorably. The Report was an able document, and does honor to the head and the heart of the chairman, the late J. B. Davis, Esq., as well as of the other members associated with him. The result was, that on the 28th day of February, 1831, an act was passed, legalizing the study of anatomy in this Commonwealth; "an act which has brought honor on our State, as the first

to set an example of such enlightened legislation;" which has done much in this and other States to remove unfounded prejudices against anatomical inquiries, and no doubt has saved many valuable lives.

SUPPRESSION OF QUACKERY.

The Legislature has, in an important sense, constituted the members of the Massachusetts Medical Society guardians of the public health. In granting a charter, it was contemplated that something would be effected towards the suppression of quackery, or, as it is expressed in the act of incorporation, "to prevent the administration of medicines by ignorant and wicked persons."

The task imposed on the Society, in relation to this subject, is a difficult one. When a regular physician speaks against empirics or their appliances, many persons suppose that he is actuated by mercenary motives; not reflecting, or perhaps ignorant of the fact, that a large item in his business, as things now are, consists of an effort to relieve sufferings produced by patent medicines and the use of nostrums. The power the Society exerts, on this subject, is a moral power. They can present motives, but cannot insure their success. They can indicate the path of safety, but have no authority to coerce men to walk in it. And this is as it should be. If any will persist in violating the laws of the human constitution, after having been duly warned of the danger of such a course, there is no power on earth

that can prevent the infliction of the penalty which nature has provided, in the shape of physical suffering. Some years since, "the Legislature enacted that irregular practitioners should not be permitted to collect their fees by aid of the law;" but this provision was not sought for by the Society; on the contrary, it was in consequence of a representation made by members of that body, that it was repealed, on a revision of the statutes in 1835.

The measures that have been adopted for the suppression of empiricism, have been, 1st, To establish and maintain a sufficient standard of medical education. 2d, To make public all useful discoveries in medicine, to the extent of their ability, particularly in relation to prevalent epidemics and unusual diseases. 3d, To exclude from their fellowship irregular practitioners of every grade, and maintain among the members a system of correct professional conduct.

Empiricism is the offspring of ignorance, or wickedness, or of both. The legitimate method of counteracting its influence is, to diffuse, as widely as possible in the community, a knowledge of the structure, functions and laws of the human body. The first principles of anatomy and physiology should constitute an important part, not only of a classical, but also of a common school education. Such works as Paxton's Illustrations of Paley's Natural Theology, and the more recent and excellent manual of Physiology, by the late Corresponding Secretary of this Society,*

* George Hayward, M. D., Professor in Harvard University.

which have already been introduced into several of our best academies and seminaries of instruction, are adapted to do more for the suppression of quackery, than volumes of denunciation and the most severe acts of prohibitory legislation. When public opinion shall become so far enlightened, that the conductors of the periodical press shall refuse to furnish a mouth-piece, through which the venders of secret medicines may trumpet their falsehoods; when respectable apothecaries shall cease to become panders and factors for those whom they know to be practising the most gross imposition on the public credulity, the lives of multitudes, now annually sacrificed on the altar of charlatanism, will be preserved, and millions of money, worse than lost, saved to an unsuspecting and outraged community. Every person, in placing his signature beneath a recommendation of a secret medicine, should feel, that in so doing, he may be signing the death warrant of some member of his species; the vender is an accessory to the crime before the fact, and the administrator, however unwittingly, the executioner. It is no palliation of this offence, that death is not always the immediate result. The tendency of a line of conduct is the rule by which we decide on the expediency of pursuing it, and every member of the profession, now present, will bear witness, that he has been frequently called to prescribe for diseases, in their nature curable, which have passed the period of recovery, under the use of inert or injurious secret medicines.

To a person feeling himself indisposed, no more

salutary advice than this can be given:—Abstain from the usual quantity of food; rest awhile from your ordinary pursuits; take, if you judge it expedient, some simple medicine, with the properties of which you are acquainted; and, if relief is not speedily obtained, decide on one of two things: either call a physician well skilled in his profession, and implicitly follow his prescriptions, or trust to the powers of nature alone. Few constitutions can sustain the shock of disease and nostrums at the same time.

Unfortunately, one of the effects of disease is, to weaken the mind, as well as the body. This is peculiarly the case in nervous affections. Hence, persons devoted to literary pursuits, and in other respects of highly cultivated intellects, are liable, in a state of disease, to be carried away by the professions of boasting empirics, and transfer their confidence where it will be abused to their own ruin, and the destruction of their fellow-men. On this principle, we account for the disgraceful fact, that gentlemen of education, clergymen even, have, in some instances, lent their names to be attached to useless nostrums, which have been spread from one extremity of the land to the other. Still more rarely, a physician is to be found, indiscreet enough to recommend a secret medicine, ordinarily, to be sure, with a proviso, that from his knowledge of its composition, he deems it safe and useful. If so, then let the formula for its preparation be published, for the benefit of the world. It is morally wrong, for a medical man to sanction by his name the use of an

article the composition of which is concealed. This principle has been seldom infringed in this Commonwealth; I wish it were in my power to add, *never* by a member of this Society.

OBJECTS OF PHILANTHROPY.

The interest, which the medical profession has manifested in several great objects of philanthropy, has done much to promote those objects, and through them the public happiness. Members of the profession, and of this Society, contributed not influence only, but funds, towards the establishment of the medical schools connected with Harvard University and Williams College. Our noble hospitals owe their existence to their efforts, although philanthropists out of the profession have contributed largely to their endowment and support. The Asylum for the Blind, and the Institution for the treatment of the diseases of the Eye and Ear in this city, may be traced to a similar influence.

The reform with respect to the use of intoxicating drinks as a beverage, so honorable to our country and so beneficial to man, if it did not originate with the medical profession, has found among its members able and efficient advocates. Nor has the Society, in its associate capacity, been inactive in promoting this reform. At the annual meeting in 1827, resolutions were adopted, expressing, in unequivocal terms, the views of the members as to the deleterious influence of these liquors, and their determination to

discourage their use, and to use their skill in ascertaining the best modes of preventing the evils they occasion. At the same meeting, a premium of fifty dollars was offered for the best dissertation on the subject, which was afterwards awarded to William Sweetser, M. D., and the dissertation read at an annual meeting, and published at the Society's expense. The reform was further promoted, by the well-known declaration of seventy-five physicians in Boston, and by the publication of similar views of many respectable members of the profession, resident in other parts of the Commonwealth.

The only additional benefit of our medical association, to which I have time to allude, is, its moral influence in promoting harmony and kind feeling among the members. It is now comparatively a rare occurrence, to find a well-educated physician and Fellow of this Society, who cherishes a hostile spirit towards other gentlemen of a similar character in his vicinity. "Live and let live," is a maxim more uniformly recognised by the fraternity than heretofore; and its increasing influence is to be traced chiefly to the intercourse which grows out of medical organization. Indeed, the sentiment is becoming universal, that it is unwise to degrade a liberal profession in the estimation of the public, by alienation among the members.

It has been objected to our Society, that we waste a portion of our funds in public entertainments. It is true we dine together on the day of the annual meeting; and it would be a sad mistake, to labor

during the whole year to promote the public health, and on the only occasion when, as a body, we are permitted to suspend our labors, to hold a public fast. But seriously, the public dinner is a bond of union to our Society. Whatever collisions may arise, in the private intercourse of individual members, they are banished from the social board. There we meet as brethren, and the cordial greetings of the occasion are as really important to our prosperity, as they are grateful to our feelings.

I have thus presented an outline of the objects of this Society and of the measures which have been adopted in prosecuting them. It has been shown, that the conditions of membership are such only as are essential to enable it to attain those objects. Its by-laws and rules of police embrace only great principles essential to its prosperity. Its benefits are equally diffused, as far as the nature of the case admits, throughout the Commonwealth. As the design of its organization contemplates a union on terms of equality of the whole body of the worthy members of the medical profession in the State, so it is hoped all such will be disposed to accept its fellowship, and aid in promoting its usefulness. The whole number of Fellows admitted, since the organization of the Society, is nine hundred and nineteen.* Of these, two hundred and forty are deceased; removed from the State, fifty-one. The whole number of physicians in the State, as nearly as can be ascertained, is

* In these numbers are not included those who were Fellows of the Society at the time of the separation of Maine, and lived in that State.

about eight hundred and fifty. The present number of Fellows living within the State is six hundred and twenty-eight, of whom sixty-two have *retired*, leaving five hundred and sixty-six acting members.

During the last year, the following deaths occurred among the Fellows. It is remarkable that, with one exception, they were all gentlemen far advanced in life, who had retired from the active duties of the profession.

NAMES.			ÆT.
Luther Allen,	Sterling,	June, 1837,	64.
David Hunt,	Northampton,	July 8,	64.
Harvey N. Preston,	Plymouth,	July 13,	31.
Isaac Mulliken,	Townsend,	Aug. 18,	80.
Joseph Fiske,	Lexington,	Sep. 22,	85.
Cushing Otis,	Scituate,	Oct.	
Rufus Cowles,	Amherst,	Nov. 29,	69.

Among the honorary members, science mourns the loss of the late Philip Syng Physick, M. D., of Philadelphia, who died on the 15th December, 1837, æt. 70. His name is deeply engraven on the rolls of fame, and his history will long occupy a bright page in the annals of our profession.

It does not become me, nor is it fitting to the occasion, to attempt his eulogy. That duty has been performed by other and abler hands. Nevertheless, as it was my privilege at one period to attend on his instructions, it may not be improper to notice some of the more prominent traits of his character. A favorite pupil of John Hunter, he early acquired a strong predilection for anatomical pursuits. His knowledge of anatomy was accurate and practical,

Although highly esteemed as a physician, in the circle in which he moved, his fame rests chiefly on his surgical skill. He was for a long period esteemed the first surgeon in Philadelphia, and perhaps it would not be too much to say, that for many years he was the first, or equal to the first, in the United States. He was deliberate in forming his judgment; but when his opinion was formed, he did not readily swerve from it. It was a favorite maxim with him, that the perfection of surgery consisted in preserving a patient without resorting to a painful operation. When, however, it became manifest that a sacrifice of life would be involved by abstaining from the ultimate resources of the art, he resorted to them without hesitation. With every preparation previously made, even to the last pin that was to confine his dressings, and with a self-possession never surpassed, and rarely equalled, he proceeded, steadily, calmly, and apparently without emotion, to the performance of his duty. No conversation could divert his attention from the interests of his patient, which for the time absorbed all his feelings. As a teacher, his instructions were plain, practical and lucid. As a friend, although somewhat reserved, his feelings were sincere, ardent and uniform. In a good old age he was gathered to his fathers,—ripe and full of honors, and has left an example of devotion to the interests of the profession, worthy of universal imitation.

NOTES.

NOTE A. [*Page* 52.]

List of Authors of the Annual Dissertations, their Subjects, and the years in which they were delivered.

Isaac Rand, M. D. On Phthisis Pulmonalis, and the use of the warm bath, ... 1804

John Warren, M. D. On the Mercurial Practice in Febrile Diseases, ... 1805

Joshua Fisher, M. D. On several Narcotic Vegetable Substances, ... 1806

Thomas Welsh, M. D. On Heat and Cold, as agents on the human body, ... 1807

Hon. John Brooks, M. D. On Pneumonic Inflammation, ... 1808

Aaron Dexter, M. D. On the use of Blisters in diseases of the articulations, ... 1809

Josiah Bartlett, M. D. On the Progress of Medical Science in Massachusetts, ... 1810

Hon. Oliver Fiske. On certain Epidemics which have prevailed in the county of Worcester, . . . 1811

Dr. Abraham Haskell. On Cynanche Trachealis, . 1812
Oliver Prescott, M. D. On the natural history and medicinal effects of Secale Cornutum, or Ergot, . 1813
Richard Hazeltine, M. D. On Phlegmasia Dolens, 1816
Hector Orr, M. D. On the properties of Animal and Vegetable Life, ... 1817
James Jackson, M. D. On Fever, ... 1818
Nathaniel Bradstreet, M. D. On the Proximate Cause of Fever, ... 1820
John C. Warren, M. D. A Comparative View of the Sensorial and Nervous Systems in man and animals, 1820
John G. Coffin, M. D. On Medical Education and on the Medical Profession, ... 1822
Henry W. Childs, M. D. On the Progress of Medical Science in this State, ... 1823
Robert Thaxter, M. D. On the Excessive Use of Ardent Spirits, ... 1824
Joseph H. Flint, M. D. On the Prophylactic Management of Infancy and early Childhood, . . 1826
Nathaniel Miller, M. D. On the Manner of detecting deep-seated Matter, ... 1827
George C. Shattuck, M. D. On the Uncertainty of the Healing Art, ... 1828
William Sweetser, M. D. A Dissertation on Intemperance, to which was awarded the premium offered by the Massachusetts Medical Society in May, 1829, 1829
Rufus Wyman, M. D. On Mental Philosophy, as connected with Mental Disease, ... 1830
Walter Channing, M. D. On Irritable Uterus, . 1833
Zadok Howe, M. D. On Quackery, ... 1834

JACOB BIGELOW, M. D. On Self-limited Diseases, . 1835
ANDREW NICHOLS, M. D. On Irritation of the Nerves, 1836
GEORGE HAYWARD, M. D. On some of the Diseases of the Knee-joint, ... 1837
EBENEZER ALDEN, M. D. Historical Sketch of the Massachusetts Medical Society, ... 1838

NOTE B. [*Page* 56.]

LIBRARY OF PRACTICAL MEDICINE.

The following works have been already published:

Vol. 1.—A Treatise on Fever. By SOUTHWOOD SMITH, M. D., Physician to the London Fever Hospital.
—Clinical Illustrations of Fever. By A. TWEEDIE, M. D.

Vol. 2.—Principles of Surgery. By JOHN PEARSON, F. R. S.
—Surgical Observations on the Constitutional Origin and Treatment of Local Diseases, and on Aneurisms. By JOHN ABERNETHY, F. R. S.

Vol. 3.—Practical Treatise on Diseases of the Eye. By WILLIAM MACKENZIE.

Vol. 4.—A Dictionary of Practical Medicine. By JAMES COPLAND, M. D. Part 1.

Vol. 5.—Anatomical, Pathological, and Therapeutic Researches on Gastro-enterite, Putrid, Adynamic Ataxic, or Typhoid Fever. By P. CH. A. LOUIS. Translated by Henry 1. Bowditch, M. D. Vol. 1.

Vol. 6.— do. do. Vol. 2.

Vol. 7.—Boylston Prize Dissertations for 1836. By Oliver W. Holmes, M. D., Robert W. Haxall, M. D., and Luther V. Bell, M. D. On the question, How far are the external means of exploring the condition of the internal organs to be considered useful and important in medical practice?*

Vol. 8.—Dictionary of Practical Medicine. By James Copland, M. D. Part 2.

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* This volume was printed and presented to the Society at the expense of one of its distinguished Fellows.

ARTICLE IV.

A REPORT

FOUNDED ON THE CASES OF TYPHOID FEVER, OR THE COMMON CONTINUED FEVER OF NEW-ENGLAND, WHICH OCCURRED IN THE MASSACHUSETTS GENERAL HOSPITAL, FROM THE OPENING OF THAT INSTITUTION, IN SEPTEMBER, 1821, TO THE END OF 1835;

COMMUNICATED TO THE MASSACHUSETTS MEDICAL SOCIETY IN JUNE, 1838,

BY JAMES JACKSON, M. D.,

LATE ATTENDING PHYSICIAN IN THAT HOSPITAL.

INTRODUCTION.

THE report here offered is derived from cases in the Massachusetts General Hospital. They occurred there between September, 1821, when the hospital was first opened, and December 31, 1835. I have stopped at the period last mentioned, because I ceased to attend there, in the autumn, after that time. Before that time, I had always been the attending physician from the first or middle of October till March or April; so that about half the cases were under my care.

It will be seen, that there was not any case of typhoid fever in 1821, one case only in 1822, and five in 1823; so that almost all the cases occured in the subsequent twelve years.

It has long been my wish to make the records of the hospital useful to the cause of science. A publication of cases merely would not answer this purpose; nor would a hasty report, made quarterly, or annually, do much better. To render cases useful, they must be analyzed, and the results accurately stated; nor would much satisfaction be derived from them, if few in number. In this way, M. Louis has rendered the most important services to medical science. It is his numerical method, which I shall attempt to follow in these reports.

It must be observed, however, that in pursuing his method, the first steps are most important. That is, the observations of cases must be accurate, and must be faithfully stated. If this be not done, we shall be led into error, not to truth. How far has this been done in collecting the cases at the Massachusetts General Hospital? I shall endeavor to answer this question honestly, so as to show where those cases may and where they may not be relied on.

Let me premise, that to have made our observations perfect, we ought in every case, first, to have ascertained the previous state of the patient's health; second, to have inquired into the state of all the functions, and to have recorded the results, noting as well what functions were well performed, as what were not; third, to have noted the successive changes in each symptom; and fourth, in examining bodies in the fatal cases, we ought to have noted the state of all the organs, those presenting natural, or healthy appearances, as well as those presenting morbid changes.

It has been the practice at the Massachusetts General Hospital, in the medical department, to note the state of the patient every day, in acute cases, as our records show. It has been our intention to inquire into the state of all the functions in the beginning of each case, and more or less fully from day to day. But we have been willing to diminish the labor of our records, by mentioning only the functions which manifested disease, while oftentimes we made no records of those which appeared healthy. Unless it was certain, however, that this course was uniformly pursued, it is obvious that there must be some uncertainty in any given case, whether something had not been omitted. There is no doubt that our negligences have been so frequent, that our records cannot be entirely relied on, except for what is positively stated. Nor can we say that our inquiries have been sufficiently full originally. We have often failed in learning, and still oftener in stating, the previous histories of our patients. And we have entirely, or generally, neglected to inquire accurately into some points. In the first years we were the most deficient; but we have made our observations with more and more care as we have proceeded. After making these concessions, I venture to add that, perhaps, there are not any observers, who have acted up to the strict letter of the excellent rules, which M. Louis has given us on this subject. I had thought myself careful in the investigation of cases, and in noting every thing essential; and I find that in some points I have been more so than he is; but

on a larger number he has been decidedly the most thorough. This is especialiy true as to the morbid appearances in fatal cases, previous to 1833. If I have an apology to offer for this, I will not trouble the reader with it; it is the fact only that interests him.

Let the reader be apprized, then, that the materials, from which this report has been drawn, are not represented as perfect. There are, no doubt, inaccuracies in the observations recorded, and there are deficiencies to be lamented. Having conceded thus much, I think proper to add, that as to every thing which is stated positively, there are probably so few inaccuracies, that they need not be regarded in a general calculation.

I proceed now to remark on the particular subjects noticed in the report.

The number of patients, on whose cases this report is founded, is more than three hundred. During the period embraced by the report, the cases varied in number in the different years. In the early years, patients did not resort freely to the hospital; but in the last ten years the number of fever cases bore perhaps a fair proportion to the general prevalence of the disease in the city. If this proportion varied much, it was when the fever was most prevalent, and when, accordingly, the hospital could not receive all who applied for admission.

Besides those reported, there are sixty-five cases on the records, which were regarded as the same disease, or at least suspected to be so, at the time of

admission. Some few cases, originally entered as continued fever, obviously were not so, as appeared from the histories after admission, and these are not included in the doubtful cases. Some had doubtful claims to be regarded as the same; but from the late period of admission, when they had become complicated with secondary diseases, or from the imperfect histories which the records furnish, it is impossible now to decide positively in regard to them; though probably more than half of these might really have been the same disease. There were others, and not very few, where it was impossible to decide even the probable period, at which the disease commenced, and where the details were very imperfectly ascertained, owing to the natural or morbid stupidity of the patients, although there was not any doubt as to the disease. These, however, were placed among the doubtful cases, because they do not admit of any inferences. But these doubtful cases deserve some consideration in calculating the proportion of fatal cases; and under that head they will be referred to.

It may be proper to make a few remarks on the name of the fever, which is the subject of this report. All, who have attended to the subject, are aware how vaguely the term, fever, has been used; and this by medical men, as well as by others. I have always held to the distinction, made by most physicians in my day, between essential, or idiopathic, and secondary, or symptomatic fevers. Among the idiopathic fevers, I have not been able, until within a very few years, to draw very certain

lines of distinction, except those dependent on their type. Nature has drawn a broad line of distinction between intermittent and continued fevers. In regard to remittents, there is not so clear a ground for distinction. These have appeared to me to belong to one or the other of the kinds before mentioned; some being intermittents accompanied by secondary, local affections, which prevented perfect intermissions. These are the formidable remittents of warm climates. Others have seemed to me to be continued fevers, in which the exacerbations were more thoroughly marked than in common cases. All other varieties of idiopathic fever seemed to me to be dependent on the following circumstances, viz., first, the disproportion in the symptoms, which appertain to the disease, and even the entire absence of some of them in many instances. Thus, in some cases the *cerebral* symptoms, or those belonging to the animal system, and the *organic*, or those belonging to the organic system, are in a certain due proportion; those of both descriptions being duly developed, and those of one, or the other kind, predominating at different stages of the disease. In other cases, the cerebral symptoms are almost entirely wanting throughout the disease; while in some they predominate so much, as to throw into the shade, or actually to mask, all other symptoms. Second, the addition of secondary and local affections, no one of which certainly occurs in the greater number of cases of continued fever, explains much of the diversity in cases of this disease.

That a great variety in the phenomena and in the severity of idiopathic fevers may be explained in this way is, I believe, admitted by all.

While holding these views I was not ignorant that physicians of great name, and particularly in France, had endeavored to show that there was an error in calling any fevers idiopathic; that in all cases fever was dependent on a local affection. As one of these physicians, I may mention Dr. Clutterbuck, of London, who labored early in the present century, and with great ingenuity, to show that inflammation of the brain, or of its membranes, was the local affection, on which continued fever, at least, is founded. But his work failed to produce conviction in many minds; certainly in mine. I will here add, that he was admirably answered by Dr. Beddoes, in one of his last and best works, that "on the combination of fever and inflammation."

The work by M. M. Petit and Serres on the entero-mesenteric fever observed at the Hotel Dieu, in Paris, in 1811, 1812, and 1813, arrested my attention, when first published. I was led to believe, however, that the fever they described was peculiar to the time and place. In a review of the work, in 1815, I urged my readers to be more attentive in examining all the organs, and especially those of the abdomen, in fatal cases of fever. But it is easier to give advice than to follow it. Had I pursued this course, undoubtedly, I should have found that we were seeing every year the disease described by these French physicians.

The work of M. Louis, on continued, or typhoid fever, is now, I trust, well known in this country. It was not till the year 1833, that it received from me the attention it merited. Since it has been known to me, I have found that the continued fever, which is so well known to us in this city, at least, was the same as that which he has described. The symptoms are essentially the same, and the appearances discovered in the body, after death, are precisely the same. These appearances had been noticed here before, when the examination was so made as to disclose them. From 1833, our fever has been the same it formerly was, and *in every case*, where an examination has been made, the morbid changes have been found to be the same as described by M. Louis. In neighboring places, a similar confirmation of the identity of the disease has been furnished from different sources. I may refer here, particularly, to cases, which occurred in Lowell, and were reported by Dr. Bartlett, the learned professor of pathological anatomy, in the Berkshire Medical Institute.

M. Louis did not show, nor did he attempt to show, that the disease he described was dependent on the morbid affection of the small intestines. But he did furnish the means of deciding unequivocally, the anatomical characters of the disease, so that it might be distinguished in other places. Thus he laid the foundation for making further distinctions, if continued fever was not the same in all places. It was almost in vain to look back to descriptions of

fevers previously written. It was for those only, who fully understood the present state of the question, and who were well acquainted with the observations of M. Louis, on both the living and dead body, to prosecute the inquiry.

Viewing the subject in this light, I had a great desire to get observations properly made on the fevers of warm climates. It was, therefore, very grateful to me to receive, in 1835, the observations made by Dr. Gerhard, of Philadelphia, a pupil of Louis, on cases of what has been called bilious remittent fever. These observations were very limited in number; but, so far as they went, they showed clearly, that this disease differed essentially from our continued fever. Since that time, the same gentleman has done still more to settle the question before us. In 1837, he has described the disease, which he calls typhus, and which, in many respects, resembles our fever; but which he clearly shows to differ from it, both in its symptoms, in their course and order, and in its anatomical characters. Meanwhile, M. Lombard, a physician of Geneva, and also a pupil of Louis, being on a visit to Great Britain and Ireland, has described the fever he saw in Dublin, principally, but also in England, and has shown that that also differed from the typhoid fever described by Louis. It would seem, indeed, that the disease, described by M. Lombard, is the same as that witnessed in Philadelphia by Dr. Gerhard.

It is not my intention to prosecute this subject any farther; nor is it important for my purpose to

inquire, whether others have made the same, or any other observations on the subject under consideration. It is plain, that there are, at least, two species of continued fever, both in Europe and this country; and further researches may very possibly show more.

A necessity now arises for distinguishing these diseases by some proper names.

In former years, I have avoided the distinguishing names applied to continued fevers, for two reasons. First, such distinctions between them, as those of synochus, synocha, and typhus, were not shown to exist in nature, and were in truth grounded on men's fancies; and, second, those names were originally significant, not indeed of different qualities in nature, but of men's notions in regard to the different natures of diseases. Until, therefore, three different continued fevers were shown to exist, and until it was shown that these had, respectively, the qualities implied by these names, it seemed improper to employ such names.

But, for a good while, the name, typhus, has been getting into common use, as the most common appellation of the continued fever of England, and of that of this country, or, at least, of New England. And under this, as an arbitrary, and not a significant name, it has been spoken of and described, more or less accurately by many writers. Under these circumstances, I had just become reconciled to adopting the name, as being one so generally received, that it must continue in prevalent use; and that, as its sig-

nificant character had been dropped, there was no harm in employing it. Now my friend, Dr. Gerhard, proposes to restrict the name, typhus, to the disease which he has recently described, and to leave to the continued fever of Louis the name of typhoid fever. Names, when arbitrary, are of so little importance, that I would not waste a moment on a choice, if only they can be so used, as to avoid mistakes and confusion. But I am truly puzzled, as the matter now stands, which name to adopt. After much hesitation, I have decided to call the disease typhoid fever.

Let me add, that as far as my knowledge extends, this is the continued fever of New England, as I believe it is that of Old England. But exceptions may occur in both countries. With us it prevails every year, though not equally; and may be seen in any month of the year. But it is most prevalent in the autumn. In some seasons, it prevails extensively, and may be called epidemic. In others, it is limited to small neighborhoods, and even to a single family, not even the near neighbors being affected. In that case, it will pass slowly through the family, attacking new residents, but not often watchers and visiters for a day. It will be from three to six months in passing through a large family. I have seen this happen in summer, but oftener in winter. Persons removed from such a family to other houses do not communicate the disease; which seems to disprove the existence of contagious properties. The experiment has often been tried under my observation,

from necessity, and the disease has never been propagated by the person removed. In one case, four persons were removed from one diseased family to four different families, and no disease was produced in any of them.*

The disease, which prevailed among us in 1808, and for some years after, under the name of petechial fever, was different from our common continued fever. The observations on it were not made, as they would be at the present day, and its characteristics cannot be distinctly stated. Meanwhile, I will remark, that I think my friend, Dr. Gerhard, has fallen into an error, in thinking that the disease was the same which he has lately described under the name of typhus, and which he has witnessed in Philadelphia. The petechial fever seldom had premonitory symptoms; it was sudden in its attack, and usually short in its course; often an ephemera, or fever of one paroxysm, and then terminating within forty-eight hours, which is the limitation of an ephemera laid down by Fordyce.† These characters do not surely belong to the disease he has described.

The cases, from which this report is made up, were none of them left to themselves. In almost all, active treatment, as the French would term it, was employed at some period, and in most of them during the first and second week of the disease. Hence the natural history of the disease cannot be

* See a paper of mine in New England Journal of Medicine, &c., Vol. XI, page 225.

† Dissertations on Fever, by George Fordyce.

deduced from them, with the same certainty, as from cases in a Paris hospital, where active treatment is so little employed in many cases. For instance, in almost all our cases, vomiting, or full purging, or both, were induced by medicine, in the first or second week of disease. Hence, perhaps, diarrhœa was a less constant symptom with us than in Paris. It will, however, be sufficiently apparent, I trust, from the symptoms, that our disease was the same as that so well known in that city.

But the value of particular symptoms, in relation to the prognosis, may perhaps be more certainly estimated from our cases, than in relation to diagnosis. The influence of age also, on the result, will likewise be shown, so far as the number of our cases can go to decide it.

I am inclined to think, that something will be learnt as to the effects of remedies. This may be relied on, that whatever is stated under this head will be done fairly, with the impartiality of a mere observer. This will be more readily believed, when it is remembered, that a large share of the treatment was conducted by others, and that I cannot have the feeling of partiality for the remedies employed, which is felt by one who gives an account of his own practice. It will be believed still more fully, if I give a history of my own views and opinions on the treatment of fever, and of the changes they have undergone. There may seem to be too much egotism in this; but it will not appear to be so much, when I add, that the same opinions have been entertained,

and that the same changes, or nearly the same, have taken place among a large part of my contemporaries, within the circle of my acquaintance; and that by giving this history, I shall possess the reader more fully and distinctly with the different methods employed in different cases, which methods are to be the subjects of comparison.

In New England, so far as I have been able to learn, it has long been the custom to evacuate the alimentary canal freely at the commencement of acute diseases. The use of cathartics has been so common, that they have been the domestic remedies first resorted to, under any threatening of acute disease, before sending for a physician. Emetics not unfrequently have been used in the same way. I well remember that my professional master did not so much endeavor to prove the utility of these medicines in the treatment of typhoid fever, as to decide which should be employed first. The emetic was commonly given first by the physician, in grave cases at least; but he instructed me that, in cases of constipation, there was often a benefit in giving the cathartic first. The reason seemed to be that, when the bowels were loaded, and were excited to action by the presence of the emetic substance in the stomach, the stomach itself was embarrassed, and could not so easily and so perfectly perform the operation of vomiting; nor under those circumstances could the rest of the system be so advantageously affected by sympathy, as when the bowels were comparatively at ease. In many cases, the physician combined the

emetic and cathartic medicines, making what was called an emetico-cathartic, leaving it to the disposition of the organs, and to a sort of chance to determine the amount of evacuation in one mode or the other.

Blood-letting, at the commencement of continued fever, has been a more rare practice in New England than in many other parts of the world; and was resorted to only when symptoms regarded as highly inflammatory were present, or when vomiting and purging had failed to give relief to the urgent symptoms of the early period.

Preparations of antimony, at least to the extent advised by Cullen, were resorted to very commonly, when my knowledge of the practice here was first acquired; yet they were not very confidently relied on. Preparations of mercury, especially the submuriate (calomel), were in much higher esteem, in the treatment of both continued fever and in the phlegmasiæ. Calomel almost always made a part of the cathartic administered by the physician at the commencement of the disease; or it was combined with ipecacuanha, or with tartarized antimony, in the emetico-cathartic. After this, the calomel was given in small doses, frequently repeated; from four to ten grains a day by the most prudent practitioners. This was either combined with antimonials, or with ipecacuanha, or alternated with them; and opium was often added, in doses of a sixth to a third of a grain to each dose of calomel, to prevent the too free operation of this article on the bowels. In this way,

from half a grain to a grain and a half of opium was often given in a day. It was not thought necessary, however, to prevent all motions of the bowels. On the contrary, it was considered an object to have dejections from them daily, or, at the least, every other day. Two or three dejections a day were not objected to, unless there was an increasing weakness and obvious exhaustion from them. In the use of calomel, it was thought useful to have a slight soreness of the gums, and even a little ptyalism induced. Prudent physicians endeavored to guard against any severe affection of the mouth; but, if now and then this occurred, it was regarded as the fortune of war, the result, perhaps, of an unforeseen idiosyncrasy in the patient, and an evil, which he ought to bear with patience, rather than to forego the aid of the Herculean remedy. The physician regarded the patient as even more secure as to recovery, though his suffering might be greater when the mouth was decidedly sore; and he was careful to watch against this effect, more because the patient would be offended, than because he would be injured by it.

This mercurial practice in acute disease began, in New England at least, quite as early as the middle of the last century, as I learnt from my master, the venerable Dr. Holyoke, who commenced practice at that period. It was then indeed limited to a few physicians, but had become universal before my studies commenced forty years ago. I was surprised, in attending the hospitals in London in 1799 and 1800, to find this practice, so familiar here, in typhus,

pleurisy, pneumony, &c., as well as in hepatitis and cephalitis, to be unknown there. Inflammation, or rather dropsy of the brain, as it was called, was combated by calomel; and Dr. Saunders, on the authority of physicians in Bengal, advised the use of calomel in acute, as well as in chronic inflammation of the liver. But in neither case was the remedy advised on general grounds, as one adapted to overcome inflammation. The use of it in continued fever would at that day have been regarded, by most physicians in England, as in the highest degree preposterous. I well remember how much I laughed within me, as young men are wont to do, at the folly of my masters, who could not see what I thought the true principle, on which the calomel proved useful in hepatitis; so that they were blinded to the extensive use, which might be made of it in other inflammations. In these views I was confirmed a few years afterwards, when some English physician, a Dr. Hamilton, I believe, first recommended the extensive use of calomel in acute diseases, such as we had long been accustomed to, and such as many of the British practitioners have since that time adopted.

In addition to these remedies there were many others of minor efficacy. One other, however, not of slight power, was vesication. This was employed sometimes at an early period for severe headache, or other severe pain, when not relieved by evacuations; and much oftener at a late period, either as a general stimulant, or with a view to combat grave symp-

toms, particularly when these were referred to the brain.

Such, substantially, was the practice in this quarter, as I learnt it, when I began my professional life, and this I adopted. I looked on bloodletting with great jealousy, except locally for specific objects; and I felt a firm faith in the potency of mercurials, if so employed as to cleanse the alimentary canal thoroughly and to answer the purpose of alteratives. It was following the idea of Mr. Hunter, that they altered morbid action, not the older notion that they altered the humors of the body.

A young physician does not at once have an opportunity to bring his opinions to the test of experience. In the fifth and sixth years of my practice, typhoid fever, not of the most severe character, prevailed extensively in this city. I did not need a case-book, for my mind, intent on the subject, retained every case which I saw, and I think it does not fail me in recalling the results, to which I arrived in a review, at that time, of my experience. My favorable opinions of early evacuations were confirmed; and that of an emetic at a very early period was rendered more favorable than before. Of antimonials, used alone, I made no trial, but I employed them somewhat in combination with calomel and opium. My faith in calomel was shaken, not destroyed. I became satisfied that the benefits of this article were not sufficient to justify the risk of a severe ptyalism, or very sore mouth; and that the

use of it so far as to induce any soreness of the mouth was of very doubtful utility, unless this was done at a very early period; that is, within five, or certainly within seven days from the commencement of the disease. But of the benefits of early care and medication in the disease, there seemed to me to be no doubt. My fatal cases were entirely, or nearly so, among those, who called on me in the second week of the disease, or later. Indeed, I came to the conclusion, that there must be something peculiar in a case to excuse the physician from censure, if he lost a patient to whom he was called as early as the third or fourth day of the disease. As my observations were made mostly amongst the poor,—for among the rich this disease was then rare, and the poor do not call for early attendance,—I lost my fair proportion of patients; but this I considered as their fault, not as mine.

It is from a belief that this represents a change of opinion as to mercurials, which many others among us have undergone during the first quarter of the present century, that I state it thus fully.

About 1812, I learnt, from Odier's Manuel de Medicine Pratique, the bolder use of antimony in febrile diseases. The method recommended by him was to exhibit this medicine every two hours, in constantly increasing doses, until it was ascertained how large a dose the patient could bear. Introduced thus gradually, he said, the medicine could be borne in much larger doses, than if given freely at first. To this mode of treatment I gave a trial, during an epidemic typhoid fever in 1814, and thought it prefera-

ble to the mercurial practice. Emetics and cathartics were first given, and then the tartarized antimony (tartar emetic), in the dose of one eighth of a grain; each succeeding dose was increased by an eighth of a grain. In this way, many persons were brought to take half a grain to a grain at a dose; some two grains, and a few three and four grains at a dose; and this without any important effect on the stomach, or bowels. I am not aware that the Italians had, at this period, adopted the use of this article, in large doses. Under the use of it, the more grave symptoms seemed to me to subside, and the disease to go on quietly, without secondary affections, and a favorable result to be produced oftener than when the antimony was not employed.

But, in some following years, I was led to doubt, whether I had not attributed too much virtue to this medicine, and gradually I used it less and less. It will appear that I resumed it at a later period. At all times, however, I found patients whose stomachs would not bear the medicine, even in small doses. I will add, that those, to whom it seemed most useful, would, after using the full doses for three or more days, express a reluctance, or even a sort of horror, in repeating it, although it produced no nausea, nor any sensible effect on them. If continued after this, the patient would appear to be sunk and very uncomfortable; so that I soon was taught to give up the medicine, or to give it in smaller doses, and at longer intervals, as soon as this feeling was manifested. I will add, that more lately I have learnt an

effect of this article, which requires to be guarded against. This is a vesicular eruption in the fauces, and an inflammation more or less extensive there, analogous to the effect of the same medicine, when applied to the skin. I believe that this evil will not be produced, when the medicine is well diluted; say two ounces of water at least to every grain of the tartarized antimony.

When the hospital was opened, the use of mercurials had not been relinquished so much by others as by myself; and I still employed them occasionally in the first three or four days of the disease, and still more when any important secondary disease, of an inflammatory character, was added. But the faith in them was lessening from year to year; and they have been given up almost entirely, in typhoid fever, since 1830.

In accordance with this statement, I find, on looking at the cases, that mercurials were employed efficiently among those, who entered in the 1st or 2d week of the disease, in fifty-five cases. The whole number who entered in those weeks was two hundred and twenty-nine. Of these fifty-five cases, fifty-three were admitted prior to the year 1831, two in that year, and one in the year 1833. To see the force of this statement, it must be observed that the whole number of cases, prior to 1831, was one hundred and forty-five; and the whole number in 1831 to 1835 inclusive, was one hundred and fifty-eight.

In the year 1833, we began to doubt the benefit of active treatment, or at least of any continued active treatment; though few patients were allowed

to go without a cathartic. This doubt was sustained by one of my colleagues, who had the charge of the hospital usually from July to the middle of October, more than by myself. I commonly had the charge for five or six months from the first or middle of October till March or April. During the years 1833, 1834 and 1835, I usually employed antimonials, according to the method of Odier, in cases admitted in the first week of the disease, and occasionally in those admitted later, except where some objection showed itself in the peculiarity of the case, and except in very slight cases. I also continued the early evacuations, but did not so often employ cathartics after the first days, as I had previously done.

These statements must be borne in mind when we come to the comparison of the different modes of treatment. I trust that this full account of the view, or theory, on which each mode was pursued, will enable the reader to comprehend the treatment more perfectly than he would otherwise do. In saying this, I am fully aware that the question in each case is, not by what theory the physician is governed in his treatment of a disease, but what he has actually done. I wish also to add, for myself, that, in whatever course was adopted, I endeavored to judge fairly what support was given by the result to the usefulness of the remedies employed, and to the truth of the theory, by which their application was directed. It was not, however, until I had finished a careful analysis of all our cases, the result of which I shall give, that I felt any strong convic-

tion of the relative advantages of different modes of treatment. Nor do I now profess that any thing more, than an approximation to an estimate of these modes, is to be authorized by these reports. If they are regarded rightly by others, they may serve as a foundation, on which to institute future experiments.

Let me also add, that no patient need be alarmed in finding our treatment of him regarded as an experiment. Such, probably, must long be the case in medical practice. The patient's assurance should be grounded on this, which ought to be the rule, and will be the rule of every honest physician, viz., that in each case, the physician will try that experiment, which, in the present state of his knowledge, appears most likely to be successful.

In relation to this matter, I must add one more remark. The numerical method is easily followed in stating the numbers who recover, and the numbers who die of any disease, under various modes of treatment; and likewise the duration of the disease in those who recover. But it is very difficult to state in this way the trouble, or the comfort, occasioned by these different modes. The ancient rule, as to the cure of the sick, was, to do it safely, quickly and pleasantly. This last cannot easily be estimated in numbers. How safely and how quickly the patient is brought to a state of convalescence may be determined with a good degree of precision.

REPORT OF CASES OF TYPHOID FEVER

IN THE

MASSACHUSETTS GENERAL HOSPITAL.

The whole number of cases, sufficiently well marked to be the subjects of a critical inquiry, was 303. In addition to these, there were 65 cases, which may be regarded as doubtful. In some of these, the details on record are insufficient to be the foundation of a clear diagnosis. In some, there is no doubt, and in others very little, as to their claim to be admitted, as cases of typhoid fever. But the details in these are insufficient to enable one to determine the period, at which disease commenced, and therefore the cases are of little value as to most points. They ought, indeed, to be kept in view, when calculating the proportion of fatal cases. It would be safe to say, that, of these 65 cases, 40 should be admitted as cases of typhoid fever. One only of the 65 cases terminated fatally.

Fatality of the disease.—Of the 303 cases, 42 proved fatal; that is (303÷42=7.214) 1 in 7.214 was fatal. But if we add the 40 cases, among

which there was one death, we find (343÷43=7.976) 1 fatal case in 8 nearly. In all future calculations, 303 will be regarded as the whole number of cases.

Sex.—The whole number of males was 208; and that of females was 95. It would be improper to ground any calculation, as to the relative frequency of the fever in the two sexes, upon this statement. It is probable that females have never resorted to the hospital so readily as men have; it is certain that this was true the first years after its establishment. In 1821, there was not any case. In 1822 to 1826, inclusive, there were 54 male, and 11 female patients; making the whole number 65, affected with typhoid fever; so that 1 in 6 nearly was a female. In 1827 to 1835, inclusive, there were 154 male and 84 female patients; in the whole 238, so that 1 in 3 nearly was a female. Even here, perhaps, the proportion of females affected with this disease was less than that, which actually occurs in the whole community. Yet it is true, as I believe, that this disease occurs among men much more frequently than among women.

Among the males, there were 28 fatal cases and among the females, 14; so that among the males (208÷28=7.392) 1 in 7.392 cases was fatal. Among the females (95÷14=6.785) 1 in 6.785 was fatal.

Age.—The age was recorded in 291 cases, and among these the average age was 23.309 years. Among the cases, which terminated favorably, the average age was 22.980. There was a difference between the males and females; for the average age

among the males was 22.908; while among the females it was 24.044, being more than a year greater in the females than in the males.

The ages were recorded in 27 of the fatal male cases, and among them the average was 24.926. They were recorded in all the 14 fatal cases among the females, and the average was 26.071. In the 41 cases taken together, the average age was 25.317. Thus it appears that the average age was about 2 years more in the fatal cases than in all the cases taken together, and about $2\frac{1}{3}$ years more than in the cases not fatal. A more minute examination into this subject confirms more strongly the influence of age on the event in this disease.

In the whole number, whose ages were recorded, viz., 291, there were 16 aged 35 or upwards, and of these, 4 died, or 1 in 4; whereas in all the 303, there died 1 in 7.214. And there were 34 cases where the age was 30 or upwards, and of these 8 died, or 1 in $4\frac{1}{4}$, nearly in the same proportion as in those of 35 years or upwards. If we deduct these 34 from 291, we leave 257, who were under 30 years of age. As there were 42 deaths in the whole, and in 1 of the fatal cases the age was not ascertained, and as there were 8 fatal cases in the 34, it appears that there were 33 fatal cases among the 257. Among these, therefore ($257 \div 33 = 7.787$), 1 case in 7.787 was fatal. Again there were 87 cases, in which the ages were 20 or under, and among these there were 8 fatal; so that among these the fatal cases were ($87 \div 8 = 10.875$) in the proportion of 1 in 10.875 cases.

The period of the disease, at which patients entered the hospital, had a manifest influence on the result,* as will appear by the following statement.

90 cases were admitted in the first week of the disease; of these 7 died, or 1 in 12.85.

139 cases were admitted in the second week of the disease; of these 16 died, or 1 in 8.68.

46 cases were admitted in the third week of the disease; of these 10 died, or 1 in 4.60.

21 were admitted in the fourth, or later; of these 5 died, or 1 in 4.20.

It will be found, that the same circumstance has a great influence on the period of convalescence, and that perhaps a day is important. I will therefore add the following table, in which the result is shown as to those admitted on each of the first fourteen days of the disease.

On	the	1st	day,	3	entered,	of	whom	none died.
"	"	2d	"	6	"	"	"	" "
"	"	3d	"	10	"	"	1	";—1 in 10.
"	"	4th	"	11	"	"	none	"
"	"	5th	"	22	"	"	3	";—1 in 7⅓
"	"	6th	"	18	"	"	1	";—1 in 18.
"	"	7th	"	20	"	"	2	";—1 in 10.
"	"	8th	"	47	"	"	6	";—1 in 7 5-6
"	"	9th	"	17	"	"	3	";—1 in 5 2-5.
"	"	10th	"	22	"	"	2	";—1 in 11.
"	"	11th	"	27	"	"	2	";—1 in 13½.
"	"	12th	"	9	"	"	2	";—1 in 4½.
"	"	13th	"	6	"	"	none	"
"	"	14th	"	11	"	"	1	";—1 in 11.
			In 229,				23 died;	—1 in 9.95.

*The same thing was found to be true in regard to cases of pneumonitis in our hospital. See my Appendix to Louis on Blood-letting, translated by Dr. C. G. Putnam.

It will be seen, that in the first four days of disease, 30 were admitted, of whom one only died; and in the remaining 11 days, 199 were admitted, of whom 22 died, or 1 in 9. Accidental causes have an influence on the small number admitted on any one day of the disease, but this comparison is between numbers sufficiently large to exclude any great influence from accident. In pointing out this advantage of an early admission to the hospital, in cases of typhoid fever, I state what the facts warrant. Let it not be supposed, that this advantage is set down to the medicinal treatment of the patients. That alone may be conducted as well elsewhere. The advantage is to be attributed to the many comforts and immunities, which the patients enjoy there, more than the same class of patients can commonly command at their own places of residence.

The following table will show the numbers admitted, and the numbers who died, in each year. It also shows those of each month. It should be kept in mind, that patients are not always admitted in the month, in which the fever commences; many are taken sick on the month before admission. It is also obvious, that death often takes place on one of the following months, so that cases are entered on months, in which they neither commenced, nor terminated. This is noted, in order to guard against false inferences.

TABLE, *exhibiting the numbers admitted and the numbers who died in each year and in each month.*

	IN THE YEAR.			JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.		JULY.		AUGUST.		SEPTEMBER		OCTOBER.		NOVEMBER.		DECEMBER	
	Adm.	Died.	1 dth. in	Adm.	Died.	Adm.	Died	Adm.	Died.	Adm.	Died.	Adm.	Died.	Adm.	Died.	Adm.	Died.	Adm.	Died.	Adm.	Died.	Adm.	Died.	Adm.	Died.	Adm	Died.
1822	1																							1			
1823	5																	2				2		1			
1824	15	3	5									1		1		1	1	3		2	1	3	1	4			
1825	18	2	9													1		3		2		7		3	1	2	1
1826	26	3	8 1/3			1	1							3	1	4		4		8	1	2		1		3	
1827	19	3	6 1/3													4	1	5		1		6	1	2	1	1	
1828	22	2	11	1	1	1		1				1		1	1	2		4		3		6				2	
1829	25	1	25	1	1											1		11		9		3					
1830	14	4	3 1/2	1				1	1	1						3	1	1				4	1	3	1		
1831	29	2	14 1/2			1						1		1		7		4	1	6	1	7		1		1	
1832	23	4	5 3/4	2										1	1	1		4		7	1	4	1	2		2	1
1833	37	6	6 1-6	1	1											3	1	2		8	1	17	1	5	2	1	
1834	34	6	5 4-6	2	1	2						1	1			1		2	2	7		11	1	6	1	2	
1835	35	6	5 5-6	2		1								3		3		3	1	9	2	7	1	4	1	3	1
	303	42		10	4	6	1	2	1	1		4	1	10	3	31	4	48	4	62	7	79	7	33	7	17	3
	1 death in 7.21 patients.			1 d. in 2.50		1 d. in 6		1 d. in 2		No death.		1 d. in 4		1 d. in 3.33		1 d. in 7.75		1 d. in 12		1 d. in 8.85		1 d. in 11.28		1 d. in 4.73		1 d. in 5.66	

In the cold months, January, February, March, October, November and December, there were 147 cases, and 23 deaths; that is, 1 in 6.39.
In the warmer months, April, May, June, July, August and September, there were 156 cases, and 19 deaths; that is, 1 in 8.21.
If we take the five months in which the disease prevails most, viz., July, August, September, October and November, we have 253 cases, and 29 deaths; that is, 1 in 8.72.
In the other seven months, December, January, February, March, April, May and June, we have 50 cases, and 13 deaths; that is, 1 in 3.84.
It appears, then, that at the season when the disease is most prevalent, the mortality is not half so great as at the season when it is least prevalent.

Convalescence.—In deciding on the period of convalescence, the same rule is followed which was adopted by M. Louis, in regard to pneumonitis, in in his work on blood-letting. In some instances, perhaps, the application of this rule is not perfectly satisfactory. But in the great majority of cases I think it is so; and I have not been able to fix on other rules, which appear to me as good as this. By this rule, the day of convalescence is that, on which the patient begins to take some solid food, such as bread or rice; the febrile symptoms having abated for two, or three preceding days. By febrile symptoms, in this case, I mean, particularly, heat and acceleration of the pulse. In doubtful cases, however, I have had regard to all the circumstances in noting the day of convalescence. It may not be improper to state, that these rules were not thought of, when the cases were going on and the records made.

In many instances, the period of convalescence was delayed by secondary affections; in a few, by causes strictly accidental, that is, not at all growing out of the principal disease; and in not a few, by errors in diet, or by undue efforts of body or mind. In some few instances, after an unequivocal convalescence in all points, for two, or three, or more days, a secondary disease has ensued. In these, I note the first day of convalescence. But, in the few instances, where there has been a relapse into the typhoid fever after a temporary convalescence, I have noted the second convalescence as the true one.

As the day of convalescence is numbered from the

day, on which the disease commences, the accuracy of one depends on that of the other. There is more difficulty, perhaps, in ascertaining the commencement in cases of typhoid fever, than in many other acute diseases. The beginning is not indeed well marked, in many cases; and the patient, whose mind has become dull, at least, in the progress of the disease, cannot well carry his memory back to the first days. This is more true, as the disease is more advanced. Thus the day of the attack may commonly be settled, with a good degree of certainty, in one who enters in the first week; with less certainty in one, who enters the second week of the disease; and with much less in one, who enters later. It almost always is found, when means occur of correcting the first story of the patient, that he did not date his attack early enough. In one who has been sick many days, there is a disposition to date by weeks. This explains why so many appear to have entered the hospital on the 8th and 15th days. They say they have been sick a week or a fortnight before admission; and having said so, many insist upon it; though probably they have, on an average, been sick longer.

Among the two hundred and sixty-one patients who recovered, the period of convalescence was ascertained with a tolerable degree of accuracy in two hundred and fifty-five. Among these the average day of convalescence was the 22d, or precisely 22.019. The difference between *males* and *females* was very slight as to this day; the average of the former being above one third of a day more than of

the latter. *Age* had a greater influence. In those under twenty-one years of age, the average day of convalescence was 20.27; while in those aged twenty-one years or over, it was 22.23; being nearly one tenth, or 2 days in 20 more in those twenty-one years old or upwards, than in those under twenty-one.

The difference as to the day of convalescence in different years was very great, the extremes being nearly eighteen in one year, and nearly twenty-six in another. All this will appear, in the following table. As a matter of convenience, I have included in this table a statement of the number of patients admitted in each year, under the care of the physician, and the proportion of those who had typhoid fever.

TABLE, *exhibiting the average day of convalescence among the subjects of typhoid fever in each year, from* 1824 *to* 1835, *inclusive; also the proportion of the same subjects to the whole number of medical patients in the hospital in each year.*

Year.	Average day of Convalescence.	Whole No. of Med. cases.	The cases of fever being one in
1824	24.	221.	14.7
1825	19.60	278.	15.4
1826	19.82	392.	15.0
1827	22.	251.	13.2
1828	18.55	357.	16.2
1829	19.91	342.	13.6
1830	22.55	285.	20.3
1831	24.77	326.	11.2
1832	17.73	318.	13.8
1833	22.29	328.	8.5
1834	25.92	336.	9.8
1835	24.93	311.	8.8

It appears, from this table, that the cases of fever were much more numerous, in proportion, in the last three years, than previously. Undoubtedly the

disease was more prevalent than usual in the city and its vicinity in those three years. In those years, likewise, the convalescence was later, and the fatality was greater, than usual. It is a question, whether these unfavorable results should be attributed to the greater severity of the disease, or to the less active treatment adopted in those years.

The period of admission had a great influence on the length of the disease, as well as on its fatality. The average day of convalescence among those, who recovered, was, in those who were admitted in the first week of disease, 17.42; in the second week, 21.21; in the third week, 25.52; in the fourth week, or later, 43.93.

The proportions will be better seen, if we suppose ten to represent the day of those of the first week; and then, in proportion, it will be found that the days of the others will be represented by 12.1, 14.6, and 25.2; or, omitting the fractions, they will be ten, twelve, fourteen and twenty-five.

There are a few instances, in which the 4th and 5th days are marked as the days of convalescence. Some persons may doubt the accuracy of our diagnosis in these cases; and perhaps even in those, in which convalescence is noted as early as the 8th or 9th day. On this point, I will remark, that in every fatal case, which we had regarded as typhoid fever, where due examination was made after death, the pathological changes described by M. Louis as essential, were found to exist in an unequivocal manner. This is some evidence of the accuracy of our diagnosis. But fur-

ther, if several persons are seized at, or about the same time, under similar circumstances, with the same symptoms, and if under judicious management a part of them recover early, while the rest go through the disease, it may be fairly inferred that they would all have gone through the same, if the treatment had been omitted. The following statement respecting cases, which occurred among the nurses and servants of the hospital, will bear on this point. Other evidence of the same kind could be offered, but it would require the statement of many details to present it clearly and with advantage. The following admits of comparatively a brief history.

In 1829, from the 18th to the 28th of August, there were four persons employed in the hospital attacked with typhoid fever. Two of them were nurses, one the porter, and one a woman employed in the kitchen, I believe, as a washerwoman. The last of these is marked on my list as convalescent on the 7th day, and then was so well as to be discharged from the ward. One of the nurses, a healthy woman but never vigorous, was marked convalescent, and indeed free from disease on the 9th day, and perhaps might have been called so earlier. She had however, been treated very actively, was reduced by venesection on the 2d day, and by vomiting and purging; so that she regained her strength slowly, and on the 20th day from her attack, she was sent into the country to recruit. She was, however, free from disease, from the 9th day. Both of these were of mature age, the washerwoman 41;

and both prudent in their general conduct. The other nurse was young and not prudent. She had an emetic, and was cupped, on the 1st day, with relief. On the 3d and 4th days, she had calomel and antimonials. On the 8th day, she appeared well, and was discharged from the sick list. There was perhaps an error in trusting her to herself so early. She soon became sick again, but did not return to the care of the physician till the 16th day, when she had severe headache, great derangement of the alimentary canal, &c., &c. Cerebral symptoms did not supervene, and on the 22d she was again convalescent. The absence of cerebral symptoms was noticed in almost all the cases of this year. In this case, the benefit of the early treatment was not entirely lost.

The porter was evacuated freely on the first day by the house-physician, but did not enter the ward. After two days he returned to his work. On the 11th day, he entered one of the wards with decided symptoms of typhoid fever; he never had grave cerebral symptoms. He was convalescent on the 24th day, but not well reëstablished on the 30th day, when he was discharged. In four days he returned. It appeared that he had eaten voraciously, and had been exposed to inclement weather. The result was great derangement of the alimentary canal, with prostration of strength. He was not convalescent again till the 44th day, and was not so well as to be discharged till the 63d day from the commencement of his disease. He was twenty-three years of

age. His disease commenced on the same day as that of the nurse first mentioned, viz., the 18th of August. There can be no doubt that one week of careful restraint, after the early evacuations, and common prudence afterwards, would have saved this man from his protracted sufferings.

That all these four patients had the same disease there cannot be any doubt, nor any, that that disease was typhoid fever. I shall add one more case in the same season.

Oct. 13th, another woman employed in the hospital-kitchen, was attacked by the same disease. She had a cathartic on the 2d day, and was received into the ward on the 3d day. On that day she was vomited and purged freely, with decided relief. She was purged again on the 4th day. On the 5th and 6th days, she had slight exacerbations in the afternoon. On the 8th day, she was decidedly convalescent; indeed the disease had ceased. A nasal catarrh followed, and a slight cough afterwards, but without serious inconvenience. She was kept under observation till the 20th day, when she was discharged quite well.

I proceed next to give an account of some of the prominent symptoms, or at least of those which were most uniformly and definitely noted in our records; and to draw from them such inferences as they may afford in reference to the prognosis.

SYMPTOMS.

Tongue.—With few exceptions, the tongue was

noted as coated, or furred. The other characteristics of the morbid state of the tongue, frequently noted, are dryness, a dark color of the fur or coat, and a denuded state. I believe that these were not uniformly noted when they occurred; but that the omissions were not numerous after the first four years. In these years, 1822-5, the notes were much less full and precise than afterwards; thus, in that time, the tongue was noted as dry in only six cases. Omitting these years, therefore, I shall state the appearance of the tongue in the years 1826 to 1835, inclusive. In this period, the cases were 177 males and 87 females; in the whole, 264. Among these the tongue was

Dry	in	92 males	(177÷92=1.92),	or in 1	case	in	1.92	cases.
"	"	40 females	(87÷40=2.17),	or in 1	"	"	2.17	"
"	"	132 cases	(264÷132=2),	or in 1	"	"	2	"
Denuded	"	35 cases	(177÷35=5.05),	or in 1	"	"	5.05	"
"	"	13 females	(87÷13=6.69),	or in 1	"	"	6.69	"
"	"	48 cases	(264÷48=5.50),	or in 1	"	"	5.50	"
Dark	"	30 males	(177÷30=5.90),	or in 1	"	"	5.90	"
"	"	12 females	(87÷12=7.25),	or in 1	"	"	7.25	"
"	"	42 cases	(264÷42=6.28),	or in 1	"	"	6.28	"

The tongue was dry in 132 cases, and of these 28 were fatal; so that (132÷28=4.71) 1 case in 4.71 cases, where the tongue was dry, proved fatal.

The tongue was denuded in 48 cases, of which 6 were fatal; or (48÷6=8) 1 case in 8, where the tongue was denuded, proved fatal.

The tongue was dark in 42 cases, of which 13 were fatal; or (42÷13=3.23) 1 case in 3.23, where the tongue was dark, proved fatal.

It thus appears, that a dry tongue was an unfavorable sign, and a dark one still more so; but that a denuded tongue was not unfavorable. For 1 in 8 is rather better than the common chance, as appears by what has been stated before.

Nausea and vomiting are frequent symptoms, particularly at the commencement of this fever. To present them justly, some discriminations would be necessary. I fear that these have not been made sufficiently; and I think that no benefit would be obtained from the numerical statement, which I am able to make.

Dysphagia.—A difficulty in deglutition, more or less strongly marked, and sufficient to be noted, occurred in 21 cases, of which 4 were fatal; that is, where this symptom occurred, 1 case in 5.25 proved fatal. This then is an unfavorable sign; but not extremely so. If, however, we were to count only those cases where the dysphagia was very great, we should find the symptom much more unfavorable.

Meteorism.—This symptom was of frequent occurrence, and so were pain and tenderness of the abdomen. But the terms used at different times, to express these symptoms, are so various, that I have not attempted to decide on their frequency.

Diarrhœa.—In the years 1824 to 1835 inclusive, there were 297 cases, of which 42 were fatal. Diarrhœa was noted in 167 of these cases, viz., 129 males and 38 females. Of these 167 cases, 32 were fatal, viz., 21 males and 11 females. Thus diarrhœa occurred ($297 \div 167 = 1.77$) in 1 case in 1.77; and

this symptom was followed by death (167÷32=5.21) in 1 case in 5.21 cases. The cases in which diarrhœa did not occur (297–167=130), were 130, of which 10 were fatal; so that in these there was (130÷10 =13) one death in 13 cases. It thus appears that diarrhœa is an unfavorable symptom. This was not equally true in all the years; which may have been owing to treatment.

Hemorrhage from the bowels, or bloody dejections, occurred in 31 cases, of which 20 terminated favorably, and 11 unfavorably. This symptom occurred, then (303÷31=9.77), in one case in 9.77, or 1 in 10 nearly. In the cases in which it did occur (31÷ 11=2.81), 1 in 2.81, or 1 in 3 nearly, proved fatal. In all the fatal cases (42÷11=3.81), this symptom occurred in 1 case in 3.81, or one in 4 nearly. In the favorable cases, it occurred (261÷20=13.05) in 1 of 13.05, or 1 in 13 nearly. In 272 cases it did not occur, and among these 31 were fatal; or (272÷ 31=8.77) 1 in 8.77 was fatal. It is then more unfavorable than diarrhœa. In some instances, the hemorrhage was followed by relief, and in a few by well-marked and permanent relief. But in most, there was great weakness and sense of exhaustion in consequence of it.

Pulse.—In 290 cases, the frequency of the pulse was noted; and it appears from them that, on an average, the least frequent pulse is 77.07; and the most frequent 106.44. If the average of each year be taken, there is no small difference; thus, in 1826,

the average of the least frequent pulses, in the various cases, was 70.08; while, in 1823 and 1824, it was 84. In 1826, the average of the most frequent pulses was 100.30; while, in 1824, it was 122.22. If we look to the individual cases, we find the least frequent pulse to be 40; this frequency was noted in one case in 1826, and in one in 1830, both males. The most frequent was 168, and this was in a female in 1830; the event in this case was fatal. In two cases, both male, it was 156; one in 1824, fatal; one in 1825, not fatal. The most frequent pulse noted in any female, where the event was not fatal, was 152. This was in 1828.

It should be particularly observed, however, that the regular visit at the hospital was always in the morning, between 8 A. M. and noon. The pulse was sometimes noted in the afternoon, or evening; but this was not done ordinarily.

In the fatal cases, the average of the lowest pulses was, in males, 85.50; in females, 106.64; in the whole, 91.88. In the same cases, the average of the highest pulse was, in males, 124.29; in females, 138.85; in the whole, 129.29. In one of the males, the highest pulse was not noted. In the favorable cases, the average of the lowest pulse was 74.16; and that of the highest was 102.68. We see, then, that much reliance may be placed on the frequency of the pulse, in forming a prognosis. In the following table, these particulars are stated in a form, which facilitates comparison.

	AVERAGE OF least frequent pulse.	most frequent pulse.
In 290 cases, all in which the pulse was sufficiently noted,.....	77.07	106.44
In 1826,.....	70.08	100.30
In 1824,.....	84.00	122.22
In the cases which terminated favorably, taken alone,.....	74.16	102.68
In the cases which terminated unfavorably, taken alone,.....	91.88	129.29
In the males, among these fatal cases,.....	85.50	124.29
In the females, among the same,.....	106.64	138.85

Ordinarily, the pulse was much diminished in frequency after convalescence, but not in all cases. In some it became more frequent, and continued so many days, although the increase of strength and the subsidence of other symptoms left no doubt of the real amendment of the patients.

As other characteristics of the pulse are less definite than that of its frequency, they are not given. Physicians differ widely, in estimating hardness and softness, strength and weakness, &c., of the pulse. Intermission is a more definite character; but I have reason to suspect that this was not always noted, when it occurred; and I have therefore not stated how often it was noted.

Epistaxis.—This symptom was noted in 74 cases; in some of which it was slight, in some copious and frequently repeated. It was, however, rarely very copious. I think it almost certain that it occurred, though very slightly, in some cases, in which it was not noted. According to our notes, then, epistaxis occurred ($303 \div 74 = 4.09$) in 1 case in 4 nearly. In the cases, in which it was noted, 11 were fatal; so

that, where it was noted (74÷11=6.72), 1 case in 6.72 proved fatal. But if all the instances of its occurrence had been noted, it probably would be found, that the fatality was not greater in them than in the whole number of cases. If, however, the cases of copious hemorrhage from the nose be taken alone, the result might be very different. It appears that among all the fatal cases, 42, epistaxis occurred (42÷11=3.81) in one case in 3.81. While among the favorable cases, it occurred in (261÷63=4.14) 1 case in 4.14. In a view of all the circumstances stated, it is not to be regarded as a very unfavorable symptom; unless, perhaps, when very copious.

Chills, rigors, heat.—In a very large proportion of cases, chills occurred, either at the commencement, or late in the disease, or both. Rigors were much less frequent. Heat, as felt in excess by the patient, or noticed by others, or both, and this with or without flush, was rarely absent through the whole period of a case. In a very few instances, however, it was not discovered, and in many it was rarely so great as to be the subject of complaint. I have not thought it necessary to state numbers as to these symptoms. It may not be useless, however, to say, that I do not find chills at an advanced, or late period of the disease, to have been usually followed by very grave consequences, though I had previously had a different impression on this point. They are noted in 29 cases, and only two of these were fatal in their termination.

Involuntary dejections, or urine.—In the last 184

cases 10 are noted, in which discharges occurred in the bed, involuntarily, or at least without due notice. Six of these 10 cases terminated fatally. In the previous cases, I feel some doubt whether these points were duly attended to, and therefore I do not count them.

Retention of urine and dysury.—In six cases, the urine was retained in the bladder, so that the catheter was used one or more days. In these cases the patients could not discharge urine voluntarily, but they were not always sensible of any inconvenience from the retention. In three of these six cases the termination was fatal, and of these three, two were male and one female. In one of the three cases, not fatal, the urine was bloody. Dysury, in a troublesome degree, occurred in six cases; none of these terminated fatally. Cases, in which dysury followed vesication by cantharides, are not included in the above statement.

Headache.—This symptom was noted in the early period of almost every case, and in many was very severe; so that remedies, local bleeding especially, and sometimes venesection, were employed for its relief.

Dizziness and tinnitus aurium.—These symptoms were often noted; but I am so confident that they were not noted in all cases, where they occurred, that I will not state the number of cases, in which they were observed. They are not of bad omen, so far as our notes can decide.

Watchfulness.—This occurred in 83 cases; that is

(303÷83=3.65), in 1 case in 3.65. Of the 83 cases, 66 terminated favorably and 17 fatally. So that in the 261 favorable cases (261÷66=3.95), 1 in 3.95 was watchful. In the 42 fatal cases (42÷17=2.47), 1 in 2.47 was watchful. Among those who were watchful (83÷17=4.88), 1 in 4.88 died.

Somnolence.—This occurred at a late stage in many cases, in which watchfulness had existed previously; and both were in very different degrees in different cases. Some of those, who are noted as somnolent, were only very sleepy; others were extremely stupid, so as to be roused with difficulty, or even not to be roused at all by any efforts. Somnolence was noted in 47 cases; of which 36 were favorable and 11 fatal. So that it occurred (303÷47=6.44) in 1 case in 6.44, counting the whole; and among the favorable cases (261÷36=7.25), in 1 case in 7.25; while in the fatal cases it occurred (42÷11=3.81) in 1 case in 3.81. In the cases in which it did occur (47 ÷11=4.27), 1 in 4.27 was fatal. It is, as well as watchfulness, among the unfavorable symptoms, even when we include the cases, in which it was slight. Yet, in the greatest degree, it was not uniformly followed by a fatal result.

CASE I.

Great stupor, lasting three days, terminating favorably.

M. M., an Irish woman, was admitted at evening, Nov. 2, 1822, in a state of entire stupor. On morn-

ing of Nov. 3d, she could be roused by a loud voice, so as to open her eyes partially, but obviously did not understand any thing about her. She was constantly groaning. Her cheeks were deeply flushed, sublivid; tongue dry, teeth dry and crusted with black sordes; P. 108; temperature not unnatural; skin dry, and dirty; abdomen tumid, but not tense; no alvine dejection, nor urine since admission last evening.

From the person, who brought her to the hospital, it was learnt that she had been sick about two weeks. It was subsequently ascertained from a physician, that she had very recently lost a child with typhus, and that others, residing in the same house, had had the same disease; also that she had been in a state of squalid poverty, from misfortune. As I knew the woman many years afterwards, I can say that she was not intemperate.

The following was ordered to be taken immediately.

℞. Antimon. tart. gr. ij.
Hydr. Subm. } ā ā
Pulv. Jalap } gr. x.; M.

If no dejection in six hours, an enema. Let her have toast-water, arrow-root and oatmeal gruel.

7 o'clock, P. M. She has had three copious dejections of a brownish yellow colour; no vomiting; stupor continues; groans less constant; P. 108, more feeble; occasional cough, with expectoration of some adhesive mucus; skin dry, not hot; feet have been cold at times.

Shave and vesicate the head.

℞. Vin. Antim. Tart. f.ʒij.
Tinct. Camphor f.ʒvi.
Ammon. acetat. liq. f. ℥ ij; M.

Give half a liquid ounce in balm tea once in three hours. If she have three more dejections, give the following.

℞. Tinct. Opii. gtt. xx
Aquæ f. ʒ ss; M.

Sinapisms to feet.

On the following day, Nov. 4th, there was more sensibility, but it was not till Nov. 6th that any conversation could be held with her. Then P. 80; tongue moist; some appetite. Nov. 8th, she was decidedly convalescent, but her amendment was very slow. Her deafness continued with unusual obstinacy for a month, though lessening gradually. She was discharged well Dec. 23d.

This was the first case of continued fever admitted to the hospital. From this cause and its own peculiarities, I have a perfect recollection of it, and especially I recollect the extreme stupor and insensibility. There was, literally, no access to her mind through her senses.

Delirium.—This symptom was noted in 108 cases, of which 75 terminated favorably, and 33 fatally. The severity, and the duration, and the constancy of the delirium were very various in the cases where it occurred. It was noted, then (303÷108=2.80), in 1 case in 2.80; among the favorable cases (261÷75=3.48), in 1 case in 3.48; and in the fatal cases

(42÷33=1.27), in 1 case in 1.27. In the cases in which it was noted (108÷33=3.27), 1 case in 3.27 was fatal. It is, then, among the symptoms of bad omen; worse than either of the two preceding. It is probable that delirium occurred slightly, in the night especially, in some cases in which it was not noted.

Subsultus tendinum.—This symptom was noted in 37 cases, of which 26 terminated favorably and 11 fatally. So that it was noted (303÷37=8.18) in 1 case in 8.18; among the favorable cases (261÷26 =10.03), in 1 in 10.03; and among the fatal cases (42÷11=3.81), in 1 in 3.81. In the cases in which it was noted (37÷11=3.36), 1 in 3.36 was fatal. So that it is a symptom of as bad omen as delirium, though of much less frequent occurrence. It is probable that this symptom occurred in a slight degree, in many cases, in which it was not noted; for it is a symptom, which could not be noted, unless it occurred at the moment, when some medical man was examining the patient.

Deafness.—This was noted in 45 cases; of which 36 were favorable, and 9 fatal. Among the whole, then, it occurred (303÷45=6.73) in 1 case in 6.73; among the favorable cases (261÷36=7.25), in 1 in 7.25; and among the fatal cases (42÷9=4.66), in 1 in 4.66. In the cases where it occurred (45÷9=5), 1 in 5 proved fatal. It is, therefore, of rather less unfavorable import than either watchfulness or somnolence; and much less than delirium, or subsultus tendinum. But it cannot be called a favorable

symptom, as it has been, I believe, since the days of Hippocrates.

Rigidity of limbs.—There are 6 cases in which this symptom was noted; of these, 5 proved fatal. The following is the case in which death did not ensue.

CASE II.

Rigidity of limbs; diarrhœa, &c.; pulse not frequent; terminated favorably.

J. W., æt. 23, not married, brickmaker; was a laborer on a farm till a year ago, when he commenced his present employment. Health not firm before present sickness; especially during the summer he has been liable to "colds and dysentery." Admitted September 12, 1835. On September 3d, he first noticed his present complaints. On 1st day, pain in head, back and limbs, with cramp in legs, followed by chills and heat, obliging him to give up work. These symptoms continued and were accompanied by great lassitude and confusion of mind, dizziness, dimness of sight, nausea, costiveness and some pain in abdomen. On 8th day of the disease, cough began, not violently, with an expectoration of thin mucus, in small quantities. On 6th day, had a physician, and then took an emetic, which operated sufficiently; since then, he has had some medicine almost daily, and has had one or more alvine dejections, in consequence of the medicine, as he thinks.

September 12th, 7 P. M., on bed; countenance

and manner dull; memory slow and indistinct; cheeks a little flushed; skin cool and damp in parts exposed to the air, hot on abdomen and parts covered by clothing; tongue dry, red, fissured, with small white patches in centre; pulse 88, rather hard, not very full; respirations 22; abdomen full and tense, and somewhat tender on pressure in epigastric and hypochondriac regions; a few faint red spots on abdomen. Complains of great thirst, with a pastiness and bad taste of mouth; head feels light. Two dejections to-day, rather loose, with some pain, attributed to medicine taken this morning.

September 13th (11th day of disease). Cheeks and chin deeply red, without corresponding heat, though hot and moist; alæ nasi pinched, not playing; upper lip strongly retracted; teeth denuded, dry and covered with some sordes; lower lip cracked; gums swollen, not sore, disposed to bleed; features still; head moved with difficulty, from rigidity of muscles of neck; some rigidity of arms, hands remain as they are placed, not falling readily; skin generally red; abdomen full, not tympanitic, epigastrium especially full; very tender in left hypogastrium, a fleshy firmness in that region; he groans most on pressure over that region, yet says he is most tender about umbilicus; pupils dilated, probably large naturally; no suffusion of eyes; one dejection this morning, small, liquid; urine sufficient; red spots on abdomen; no sleep, by his report; tongue very dry, fissured, not coated; P. 84.

℞. Sodæ Carbonat. gr. v.

to be taken four times a day.

September 14.—P. 84; skin moist; face less flushed; muscles less rigid; tongue moist at edges, sticky in centre; abdomen less full, but as tender as yesterday; sudamina about neck; great dryness of throat; no sleep; 3 dejections; has coughed a little.

Eight leeches on left hypochondrium, to be followed by a poultice over the whole abdomen. Let him have ice freely to hold in his mouth. Occasionally bathe the head with cold vinegar and water. At bed time let him have the following.

℞. Spirit. Clutton. Febrifug. gtt. xxv.
Aquæ f. ʒ i. M.

September 15.—Great relief to abdomen since leeches; abdomen soft and bears pressure; tongue very moist, yet thirst continues; teeth clean, yet dry.

September 16.—Countenance as before; tongue more dry, tremulous, lobes swelled; P. 84; shows loss of flesh; while feeling pulse, his hand is gently drawn towards the body; 3 or 4 dejections by his report, more numerous by report of nurse; slept a little; there is still a tenderness in left hypochondrium; spleen felt there very distinctly.

Eight leeches to left hypochondrium, to be followed by poultice over abdomen.

September 17.—Night better, except disturbed by diarrhœa; 6 dejections; tongue sticky and more dry; spleen not felt so fully, left hypochondrium less tender, but epigastrium more full and tender; red spots very distinct, but not numerous; flush and heat less.

Let him take each dose of soda in the following,—

℞. Mist. Calc. Carbonat. f. ʒ ss.

September 18.—Very little sleep; less tenderness in abdomen; P. 72; thirst not abated.

September 19.—Night comfortable; four dejections; spleen less distinct; more fulness in epigastrium, especially at the right; sudamina about neck; countenance rather more bright; moves his head more easily, but is dizzy on motion; great weakness; no appetite; P. 72.

Let the limbs be washed night and morning with warm water and soap.

September 20.—In first part of night delirious; afterwards did very well; four dejections; tongue redder at tip, white in centre; sordes on teeth; very thirsty; sudamina quite thick about neck; abdomen less full; spleen can be felt, but much less than before.

September 21.—Tongue as before; lips strongly retracted; mouth sore at corners; lips and teeth dry; flushed; features still; still some stiffness of joints; moves head with some difficulty; P. 72; seven dejections.

May have milk.

September 22.—Rested very well; has decided appearance of mending; mouth more closed; teeth cleaner; spleen less distinct; P. 72.

May have rice with sugar, and a little cracker.

September 23.—Reports himself better and looks so; slept well; food sits well; four dejections; teeth cleaner; thirst continues, especially at night; P. 84, strong and full.

September 24.—Countenance brighter; P. 72; five dejections, small.

Toasted cracker.

September 25.—Three dejections; red spots faded; P. 72. From this time mending. On September 27th (25th day of disease), the rigidity of muscles of the neck had not quite gone; the diarrhœa ceased; more flushed, and red spots brighter; yet he was able to lie on either side instead of being on his back solely, as he had been. After that day, the amendment was steady, and he was discharged well, though his strength was not entirely reëstablished, October 10th, the 38th day of the disease.

It appears that the rigidity in the muscles of the neck was noticed, on the 11th day of the disease, and some rigidity in the arms, on the same day; this was so great that the limbs did not readily obey the laws of gravity when raised, nor were they moved voluntarily. On the 14th day, the arm was drawn toward the body by a slow, involuntary action of the muscles, when it had been moved to examine the pulse. Some rigidity remained in the limbs on the 19th day, and in the neck, as late as the 25th day.

It cannot be said, that the rigidity of the limbs was as great in this case, as in some others; yet it seemed proper to bring it into view, as so few cases have terminated favorably, where this symptom was noticed.

It may be proper to add, that this patient was not under my care; but the details, which I have copied from the original records, show that it was observed with fidelity.

It may not be useless to add another case, where rigidity of the limbs occurred with convulsions, and in which the more usual termination ensued.

CASE III.

Mild in the beginning; in fourth week cerebral symptoms urgent; rigidity of limbs; spasmodic affections; pulse not frequent; death on 28th day.

J. H. S., carpenter, Boston, æt. 40, admitted October 16th, 1835; wandering in mind, answers not definite; as well as can be ascertained he became sick about September 25th, but did not give up work till 5th inst. Before that time, diminution of strength, lassitude, headache, dimness of sight, dizziness, ringing in ears, and diarrhœa. Gave up work because his strength was exhausted, but thinks he had not any other aggravation of his symptoms; thinks he has not had any chills. From the 5th, he has kept his bed most of the time; head as before; bowels alternately loose and costive, with pain in them and in his back; some nausea; no cough; not much sleep for a few nights past. He has had some medicine, but he does not know what.

Oct. 16th (22d day of disease), 7 P. M., his state was as follows. On bed; mind wandering, yet he answers some questions; speaks as if inebriate; tongue thickly coated, pasty, white, edges red and moist; breath feverish; nausea; abdomen tender, not tympanitic; no red spots; P. 72; flushed; skin moderately warm, but he feels cold; headache.

Oct. 17th.—P. 72; tongue swollen, moist, edges not coated; no red spots, nor sudamina; no dejection; night watchful, often groaning, sighing and gaping; skin neither hot, nor cool, dry and inelastic; dull headache, pain in eye-balls; no rigidity of limbs.

℞. Ol. Ricini f.ʒij., to be given now, and repeated in four hours if no dejection. Enema afterwards, if necessary. After operation, the following every six hours.

℞. Sodæ Carbonat. gr. v.

Oct. 18.—One dejection, after two doses of oil and enema. Restless and delirious through day and night; a little sleep this morning; P. 72.

Oct. 19.—Asleep. Has been more quiet, yet watchful and talking to himself; P. 64, some subsultus tendinum; one dejection; no urine since night of 17th; flat on percussion above pubes, tumor of bladder visible; elsewhere abdomen natural; tongue as yesterday.

Catheter p. r. n.

In the two following days, he had convulsions and rigidity of muscles in arms, particularly in the left; the forearm could be extended by force, but, when the force was withdrawn, it was immediately flexed. On the 20th, there was carpologia, and on 21st, an entire loss of consciousness. The urine was passed without catheter after the 19th, but involuntarily. On 21st, he had great dysphagia and a strong contraction of the abdominal muscles, so that the ribs seemed to be projecting. The spasmodic affections subsided after the morning of the 21st, but he re-

mained unconscious, and died at 5 A. M., Oct. 22d, the 28th day of his disease.

No autopsy was permitted in this case, but the disease was unequivocal; and it is a good instance of rigidity of the limbs, followed, as usual, by death. The absence of frequency in the pulse is very rare in a fatal case. It seems to be connected with the predominant cerebral symptoms, but the two do not always go together.

In three cases, the limbs were *cataleptic;* or remained as they were placed. Only one of these cases terminated fatally.

In connection with the foregoing, I will state some other symptoms relative to the lower extremities.

In one case, there was a temporary palsy in one leg. In two cases, there was a numbness, lasting for several days. In eight cases, there was a painful state of one, or both legs, for many days, in the latter stage of the disease. Indeed, this affection may be classed among the sequelæ of this fever, as it occurred after convalescence. It was attended with more or less of lameness in motion. I have seen cases of this affection lasting several weeks, and causing much anxiety. These have been rare cases brought to me from the country. I believe that entire recovery always takes place. I do not recollect to have seen this affection described by any one.

In five cases, swelling of one leg, from well-marked phlebitis, occurred at a late period of the disease. In one of these, cystitis, or inflammation of the mucous coat of the urinary bladder, occurred also.

Cutaneous eruptions. Red, or rose spots.—Rose spots (*taches roses*) were not noticed until the year 1833. In that and the two following years they were noted in 70 cases; in some of these, however, they were very few in number. Sometimes only 3 or 4 were seen; but in a few cases they were numerous, covering the trunk, and appearing even on the limbs. In the years 1833–35, inclusive, there were 106 cases; so that (106÷70=1.51) 1 in 1.51, or about 2 in 3 had rose spots. I am not at all satisfied, however, that they did not escape notice in some cases. In these three years, 18 cases proved fatal (106÷18=5.88), or 1 in 5.88. Now in the 70, in whom rose spots were noted, 9 only proved fatal, or (70÷9=7.77) 1 in 7.77. So that if they were noted correctly, this eruption might be regarded as a favorable sign. It certainly is not unfavorable.

Sudamina.—These were noted only in 1833–35, and not perhaps in all cases even then. At any rate, they are mentioned in only 41 cases, of which 4 were fatal; making them even a more favorable sign than the rose spots; for (41÷4=10.25) only 1 case in 10.25 was fatal, where the sudamina were noted. It would appear that they occurred (106÷41=2.58) in 1 case in 2.58.

Excoriation of back.—Excoriation over, or near the sacrum, and in some cases about the hips, is noted in various cases, both those terminating favorably, and in those terminating fatally. But this is one of the symptoms, which, I feel assured, was not recorded as often as it occurred. I do not, therefore, give the number of instances, in which it was noted.

Enlargement of the spleen was discovered in various cases; some before we were aware of M. Louis's observations on this point, and many more after. But it was not a matter so carefully attended to, in every case, as to give value to our observations.

We call this disease continued fever, and rightly. But *exacerbations* are very common in it, more in some years than in others; though they do not occur in all cases. They are marked by flush, or heat, or pains, or restlessness. They vary much in severity, and may be once or twice in a day; often between 11 A. M. and 4 P. M.

Secondary diseases.—Otitis was noted in seven cases. Probably it existed in a slight degree in some cases, in which it was not noted.

In only four cases is an inflammation of the parotid gland noted, but I can hardly doubt that it occurred in more instances. In only one of the four was the event of the case fatal. In only one was there suppuration, and this was not fatal in its result.

There would seem to be only four cases, in which peritonitis occurred from perforation of the intestine. Death ensued in all of them, but they were not all examined after death.

Pneumonitis was not rare among the secondary diseases; but bronchitis was by far the most common. As this last occurred most frequently, when there was no longer any anxiety as to the result, its symptoms were noted slightly, or loosely. On this account, I do not state the number of instances in which it happened. And even the pneumonitis, when not severe, was

slightly noted; and in some cases, it was evidently masked by cerebral symptoms, as was found after death. So that I abstain, likewise, from stating the relative frequency of this disease. Both these diseases were most severe in autumn and winter; but they occurred also in summer, especially the bronchitis.

Cough is noted in 145 cases, of which 21 were fatal. In 24 of these cases, there were bloody, or rusty sputa, and of these 4 were fatal. In 45 of the others, sputa not rusty, nor bloody, were noted to attend the cough, and of these 8 were fatal. It is probable that the same sputa occurred in some other cases and were not noted. Dyspnœa was noted in 70 cases, of which 17 were fatal.

Predominance of particular symptoms.—It is well known, that, at certain periods, typhoid fever and other acute diseases are unusually severe and unusually fatal. In like manner, certain symptoms appear more frequently, or with unusual severity, at particular periods. This has attracted my notice, when engaged in practice, and was quite manifest in taking off from the hospital records the notes, on which this report is founded. I will state a few instances, derived from a hasty review of those notes.

In all the cases together, 1 in 2 had a dry tongue. In the latter part of 1828 and beginning of 1829, there were, in 11 successive cases, 9 which had this symptom. In 1831, in 15 successive cases, there were 11 with the same. In 1834, this symptom was noted in 10 of 12 successive cases. And in 1835, it was noted in 22 of 27 successive cases.

Epistaxis occurred in 1 of 4 of all the cases. In 1834, of 12 successive cases at one period, it occurred in 7, and of 14 successive cases at another, it occurred in 10; making 17 in 26; that is, in nearly 2 out of 3.

In 1834, the whole number of cases was 34. Among these, watchfulness was noted in 15, or rather less than half. The proportion in the whole number of cases was 1 in 3.65. But these 15 cases were not scattered through the year; for five of them were the first 5 cases in the year, and seven of them were in 10 successive cases near the end of the year.

In 1835, the whole number of cases was 35. Among these, watchfulness was noted in 17 cases, very nearly half. But 5 of the 17 occurred in 6 successive cases; and 8 occurred in the 10 last cases of the year; so that in these 16 cases, there occurred 13 of the 17 cases, which belonged to the whole year.

In 1833, on the other hand, I find two instances, in each of which, this symptom was absent in seven successive cases.

Deafness occurred in 1 case in 6.73. In 1833, in 8 successive cases, 7 were attended by deafness. It occurred in only 5 other cases in that year, though the whole number was 37.

In 1829, there were 25 cases, of which one only occurred in January and was fatal. This belonged to the year preceding; I mean that it might be supposed to have its character from that of the autumn of 1828. The first of the other 24 cases was admit-

ted in the spring. None of these twenty-four were fatal. Among them cerebral symptoms appeared much less than in the average of all the cases. Thus watchfulness was noted in seven; delirium in four; somnolence and subsultus tendinum each in one. On looking back, it will be seen that, except the watchfulness, all these symptoms were in much less proportion than in the whole number of cases, and even than in all the favorable cases. In the one fatal case in 1829, somnolence and delirium were noted, the last being unusually severe. I think proper to add, though I can make no inference from the statement, that in 1829, headache is noted as unusually severe in a large proportion of cases; that is, in thirteen of the twenty-four cases. The only case in the year, in which it was not noted, was the fatal case. This is readily explained, when it is added that the case was marked by stupor and great delirium, which prevented a knowledge of the patient's sensations after his admission, as well as of their history previously.

In looking over those years, in which the symptoms were most accurately noticed, I do not find the headache marked as unusually severe in any proportion near to that above stated. The greatest proportion in any other year, is nearly one case in four.

To the foregoing remarks, I will add only that in 1827, chills were very frequently noticed during the progress of the disease; and that in 1830, the exacerbations of fever were unusually severe in many instances, giving the disease a remittent character.

Relapses.—In cases of measles, small pox, and other diseases, dependent on specific morbid poisons, we never see a relapse of the disease. The small pox, having run its course, will not appear again, whatever imprudence the patient is guilty of during convalescence. I think it is not so with typhoid fever. An error in diet and regimen is often followed by a new train of symptoms, after convalescence from this disease; and these appear to me to be such as belong to this fever. It is, however, true that they are not always so strongly characteristic, as to leave no doubt on the subject. If, however, they are carefully noted, they will not be found to accord with any other disease. I hope by these remarks to call such exact attention to the subject, as may decide this point hereafter. The following case is one, which seems to me to support the opinion, that I have advanced. The red, or rose spots, after the relapse had occurred, may be regarded as of value in the absence of other well-marked signs.

CASE IV.

Admitted on 53d day; had been convalescent at end of the sixth week; relapsed after error in diet; some rose spots on 62d day; pain and numbness in feet; again convalescent in tenth week.

J. M., æt. 22, laborer, Boston, admitted February 6, 1834. Has enjoyed good health until the present disease. Has been unwell since Dec. 16th, now

53d day. He was seized at first with pain in head, trunk and extremities, accompanied by chills, heat, &c. He does not recollect how long these symptoms lasted. From his account, he was actively treated, and he has been convalescent; he says that, for eight or ten days, he had no trouble except weakness; that last week he was gaining, and felt stronger than he now does; that his appetite was good. At that time he took some milk with a quantity of soda crackers, and has had no appetite since. He thinks he has slept very little, having been annoyed by pain and numbness in his feet.

February 6, 5 P. M., his state was as follows: Tongue moist; sordes on teeth; no dejection for two days; some soreness at hypogastrium; P. 104; countenance flushed, but languid; skin dry; sight and hearing good; mind slow, otherwise natural.

February 7.—Tongue denuded except at root, red, dried except on sides; abdomen not tense, but tender in every part on pressure, and he thinks it has been so for ten days; one dejection of good color, not offensive; P. 104; rather hard; countenance sallow, a little flushed; temperature natural; pain and numbness in feet continue, though diminished.

Liquid farinaceous diet;—some of it to be seasoned with wine, if agreeable to him.

To the 13th of February, he grew more sick; for two or three days had nausea and some vomiting with extreme thirst; watchful in the night with heat; pain in stomach, and tenderness in abdomen; this last much relieved by leeches on the 8th of February;

tongue more moist from February 9th; P. 92 to 100, intermittent on 11th and 12th February; took cider on those two days, and also on 13th, but then incommoded by it; bowels kept open by enemata.

February 14th and 15th, he was mending somewhat; P. 96; a few red or rose spots on 15th; same day some appetite, and on his request he had some hasty pudding and molasses.

Previous to 16th February he had had a slight cough, or rather a frequent hemming with some mucous sputa; that day the cough increased, and it was annoying for several days afterwards.

Feburary 17th, his appetite increased, and he began to eat a little bread; on 19th and 20th hunger was strong, and he added potato and butter with benefit. Till February 21st, his pulse continued at 96; on that day, 72. His amendment continued from this time, but he had been so reduced in flesh and strength, that it was long before he was well reëstablished in health. The feet were more or less painful and numb for three weeks; and the pulse quite peculiar, often intermitting and very irregular, varying suddenly from 60 to 120, but not always in the same proportion; accelerated very much by motion; at a late period 44 to 48, but then rising suddenly to 96 and 108.

He was at last well confirmed in convalescence and discharged well, March 21st, the 96th day of his disease by his account.

While at the hospital, the treatment was very mild; besides the leeches and the enemata, he had

some opiates for his cough; and at a late period the sulphate of quinine was tried, but was soon omitted, from an opinion that it did not agree well with him. I could add two or three other cases, of the same *general* character.

Contagion. — The question frequently arises, whether this disease is contagious; in other words, whether it can be communicated from one, who has it, to one who is in health, or who is free from this disease at least.

If I were to answer from general experience, I should say that instances occur, in which there is much in favor of the affirmative; but that in the great, very great majority of instances, there is not any such evidence. At times, the typhoid fever extends through every part of a town, or city; at other times, it is limited to a district more or less narrow; and at others, it will be found limited to a few families in a city, these families being widely separated from each other. In only one instance have I ever known this family disease occur twice in the same house, and then it was in the same family. It was in a very old house, being the memorable house recently taken down, which was said to have been built by the celebrated Sir Henry Vane. I have, however, known this *family fever* occur in the most cleanly houses, and once in a perfectly new house, into which a very respectable family of the most cleanly habits moved in the autumn; having spent the summer in the country, and in good health. In this instance one of the family, a boy, resided at his

grandfather's in a distant part of the town, but was at his father's house very often. He had the disease at his grandfather's and literally died in his grandmother's arms. Yet none of the grandfather's family had the disease. I have already referred to this subject in part.

But what evidence do the hospital cases afford on this subject? I may say, that occasionally, our patients stated that they came from families, where the disease existed, and in a very few instances, they had been nursing the sick. As to our hospital nurses and servants, I have collected all the cases, in which they had the disease. It should be noted, first, that none of these were old, rarely one above forty, most of them under 30; and that among them, being usually from 20 to 25 in number, there were frequent changes. Thus in 12 years there have been many of them, probably 200. Also, they were often fresh from the country. They were therefore fair subjects for the disease.

In our 303 cases, 20 were nurses, or servants of the hospital, residing in it. Except the nurses, however, they had not much intercourse with the sick. One was in 1824; one in 1827; one in 1828; five were in 1829; six in 1831; three in 1832; one in 1833; one in 1834; and one in 1835.

It is first to be remarked, that the number of inmates of the hospital, affected with the disease, did not bear any proportion to the numbers admitted with it, in the several years respectively. Nor did they occur most in the years, when the disease was

most severe. It was in 1833 that the disease was most severe in its character, and only one of the inmates had it that year. In 1829, it was the most mild, and in that year five of the inmates of the hospital had it. It would be very difficult to trace out the particular chances for exposure in each case. But in regard to four of those in 1831 the circumstances are so peculiar, as to merit a particular statement.

In 1831, the first patient was admitted in January, the second in May. This last was not a severe case; the patient was convalescent on the 21st day, and was discharged well on the 31st day of the disease, viz., on the 9th of June. No other case was admitted before four of the hospital inmates were taken sick with the fever. These were admitted to the wards from June 29th to July 5th, and on July 26th a fifth was admitted. Although admitted on different days, three of the first four were taken sick on the 25th and 26th of June, the fourth on the 2d of July; and the fifth on the 24th of July. In the first week of July there were admitted two patients with the same disease, from abroad; these were persons, who had not had any connection with the hospital; they were taken sick on the 22d and 26th of June.

It is difficult to persuade one's self, that in these instances, occurring when the hospital was so free from the disease, contagion had any influence.

It should be added, that our hospital pupils have not been more frequently affected with the disease, than others of the same age. Of course, this statement

is not founded on an exact comparison; it would be difficult to do this; but I am quite satisfied of its accuracy.

Pathological anatomy.—In a large proportion of the fatal cases, examinations were made after death. But it was not till Oct., 1833, that the intestines were examined in a proper manner. Indeed, they were most frequently left unopened before that year; but, where they were examined, the diseased appearances in the patches of Peyer's glands were noted. In all the cases, from Oct., 1833, to the end of 1835, in which those, who died of the disease under consideration, were examined, the appearances were such as M. Louis has described. The number of cases, examined in this period, was eleven. The following cases are given, as exhibiting the most common varieties. In one of them a perforation of the intestines had occurred. There was another similar case in the same year, as shown by symptoms during life, and by the examination after death.

CASE V.

Symptoms not severe at first; but on admission, 15th day, cerebral symptoms quite severe; slight rigidity of limbs; meteorism; P. very frequent; some signs of pneumonitis; death on 18th day. Peyer's glands diseased, not ulcerated; spleen enlarged, &c.

H. S., æt. 23, bar-keeper at a tavern; admitted Sept. 24, 1835. He was delirious when he entered

and could give no account of himself; but the following was learnt from the physician, who had attended him since the 15th inst. He was taken sick about the 10th Sept., when he had lassitude, anorexy, and other symptoms belonging to the early stage of typhoid fever. Sept. 15th, he had nausea, tongue coated, no pain, P. not morbid. He then had an emetic, and vomited much bile. Sept. 16th, he had Ol. Ric. f. ʒ ss; that day thought himself so well that he was on his feet. Sept. 17th, severe pain along the false ribs just left of the epigastrium, for which he had three leeches with relief. Sept. 19th, headache, heat, and diarrhœa; for which he had some opiates. Sept. 20th, some cough, but no physical signs of disease in chest. Sept. 21st, slight delirium, tongue dry and cracked. These symptoms continued till his admission to the hospital.

September 24.—His state was as follows. Tongue dry, cracked, and scaly, with red edges; teeth very foul; abdomen full, tense and tender; no red spots; P. 144; quite warm, except feet; countenance pale, without expression; eyes continually wandering, pupils much dilated, not influenced by light; mouth half open; articulates with difficulty; talks much, incoherently; in constant motion, endeavors to rise, seems apprehensive of some evil; throws off the bedclothes; arms remain fixed, when flexed; occasional cough.

September 25.—No sleep; tongue quite dry and crusty; one sputum in cup, rusty and foul; one dejection, involuntary; P. 120; eyes suffused, as if bruised; some subsultus tendinum; no sudamina.

September 26.—Four dejections, involuntary; P. 132; is more manageable; countenance rather better, less sunken; skin moist; sudamina well marked on abdomen.

September 27th. Perfectly unconscious since 4 P. M. yesterday; countenance much sunken; much subsultus tendinum; hands livid; sudamina very numerous. Died before noon.

AUTOPSY—TWENTY-TWO HOURS AFTER DEATH.

Exterior.—Very rigid. Lividity on back of thorax. Sudamina on each side of neck. Abdomen moderately full. Muscles firm, dark red, dryish.

Head.—Brain rather firm: slight serous effusion in pia mater.

Thorax.—Pleurae healthy. No adhesions. *Lungs* healthy, except some serous congestion of upper lobe. *Pericardium:* average quantity of fluid, darker than natural. *Heart* rather flaccid; blood in very moderate quantity, quite liquid, except for some greenish fibrin in right ventricle.

Abdomen.—Stomach not contracted, contained several ounces of green, rather thick fluid. Mucous membrane, towards cardiac orifice, of a deep red, but sufficiently healthy as to thickness and consistence. In it, but not penetrating its substance, are five or six narrow superficial ulcerations, about one-third of an inch in length. Mucous membrane, elsewhere, of natural color; somewhat mamelonated towards pylorus.

Small intestine: not contracted; contained a con-

siderable quantity of mucus and healthy secretions, except about two feet near middle of ileum, where it was deeply stained with blood. Throughout last nine feet, Peyer's glands in a state of acute disease; about 26 being counted. The disease increases progressively towards cœcum; it consists of a very remarkable, well defined, and uniform thickening, and such a degree of softness, that the surface, to some depth, may be scraped off like a pulp. Many of these patches immediately surrounded by a red line, but generally they are of a light red color, contrasting with the deep red of the intervening mucous membrane. No ulceration: but numerous opaque, whitish, very minute points in the softened portions. Numerous patches, by estimate, 2 inches in length, and one, near the cœcal valve, perhaps 5 or 6: some not more than one-third or one-half an inch in breadth. Throughout rest of intestine, the patches quite distinct and healthy; a few of them, however, appearing to be softened before becoming otherwise diseased. Brunner's glands, also, in last nine feet of intestine, very numerous, and, in some cases, so much enlarged, that it was often difficult to distinguish them from the small irregular patches of Peyer, and becoming more and more affected towards valve. Mucous membrane, generally, throughout intestine, well, except for the deep redness in lower portion.

Large intestine.—Moderate distention from gas. Considerable quantity of healthy, liquid fæces. Brunner's glands, numerous and enlarged: mouths patulous and in many apparently ulcerated. Just

within cœcal valve are two ulcers, about one third of an inch in diameter, dark colored, penetrating to muscular coat, edges red. Mucous membrane generally appears well. *Mesenteric* glands, corresponding to the diseased Peyer's glands, enlarged, red, soft, and much infiltrated with serum, so as to break down easily under pressure, but not containing pus. Those in the mesocolon somewhat in same state; the rest healthy. *Liver* healthy. Gall bladder; average quantity of bile, yellowish, quite liquid. *Spleen*: length 7 inches: breadth 5 inches: thickness 2½ inches. It breaks down readily under pressure. Color very deep red. Pancreas, kidneys, and bladder healthy. Bladder containing 5 or 6 ounces sufficiently healthy urine.

CASE VI.

Cerebral symptoms predominant after 2d week; pulse not frequent; after some appearance of convalescence for six or seven days, on the 32d day, symptoms of perforation of intestine and consequent peritonitis; confirmed by examination post mortem.

H. G., æt. 22, carpenter, Boston, not married; has generally had good health, and has been well through the summer. Admitted September 14th, 1835. Has been sick, so as not to work since 3d instant; and, for a few days before that, thinks he had vertigo, noises in ears and dimness of sight. On the 3d inst. severe headache, pain in back and limbs, and great

heat, but no chills; he was then costive in bowels. Headache continued three or four days, and since then, he has had much dizziness, and his mind has been much bewildered; also slight cough, but no expectoration. He was bled early in sickness, and has taken some medicine, but he does not know what, and has had two dejections daily, as he thinks.

At 7 P. M. September 14 (12th day of the disease), on bed; countenance dull, face flushed, mouth open, teeth dry with sordes, eyes half closed; manner slow, and memory imperfect; hearing very imperfect (not so in health); head dizzy; skin hot, not moist; tongue very dry, red at tip and edges, with thick white coat in middle; very thirsty; throat sore and parched; P. 84, not hard, not full; abdomen very tense, not full, tympanitic, quite tender on pressure, especially in upper part; some faint red spots on abdomen; one dejection to-day, very small, with a little pain.

September 15.—P. 80; T. yellowish brown at centre, edges dry and red, tip scaly; meteorism of abdomen; very tender there on pressure.

Hyd. Submur. gr. iv. to be given at once, and to be followed by Ol. Ricin. f. ℥ ss. Enema at evening if no free dejection. Afterwards Sodæ Carbonat. gr. v. once in six hours.

September 16.—Countenance as before, perhaps a little brighter; P. 84; less deaf; four dejections since the oil, the first two very copious, all liquid; rested well in night; tenderness in left hypochondrium.

Eight leeches on left hypochondrium, and poultice afterwards.

September 17.—More flushed, especially red on nose and chin; P. 83; T. very dry; less tender in abdomen; four dejections; thirst not constant; asks for milk.

Milk and water occasionally for drink.

September 18.—In day, tolerably comfortable, some delirium in night; now asleep; P. 72; deeply flushed, especially on nose; skin cool where exposed; covered by three or four blankets by his own choice; on waking, pupils much contracted, eyes suffused; speaks as if intoxicated; meteorism rather less.

September 19.—Less flushed, face less turgid, eyes very heavy; P. 72, double beat very distinct; red spots very distinct; left hypochondrium more full than right; three dejections; T. less dry; teeth dry; lips cracking; slept well, a little delirium in evening.

September 20.—Says he is not so well, but makes no distinct complaint; slept well, or was stupid in night; more somnolent; trembles much when he rises in bed; P. 72; T. very dry; more flushed; not tender in abdomen when pressed.

Omit carbonate of soda.

℞. Potass. Nitrat. gr. iv. to be given in water once in four hours, unless diarrhœa urgent.

To the end of the fourth week of his disease, September 30th, he remained without great changes; generally there was an increase in the cerebral symptoms, rather more delirium, on 26th September especially; some subsultus tendinum, tremor of hands, strabismus on 24th September; after this, dejections

and urine involuntary; diarrhœa nearly the same or rather increasing; red spots very distinct, September 30th (28th of disease); P. varying from seventy-two to ninety-six. September 28th, a few rusty sputa, yet otherwise better that day; T. more moist and cleaner, posture more natural, countenance brighter. There was a desquamation over the forehead and nose, which had been particularly red on September 27th; and this had extended to the breast, and was on the hands also October 1st. October 3d, epistaxis was noted, and the next day a black slough over sacrum. From September 28th to October 4th, there had been some appearance of convalescence, though not very strongly marked; the tongue had been getting cleaner, the delirium and subsultus less.

At 2 P. M., October 4th, he had a severe rigor, and appeared to be in pain; his answers were incoherent; and on pressure over the abdomen, he shrunk very much. The rigor passed off within an hour, and was followed by flush, heat and sweat with P. 120. Before this, not more than 96. Before evening, he had an involuntary dejection. He sunk through the night, and died at 5 A. M., October 5th.

AUTOPSY—FOUR HOURS AFTER DEATH.

Exterior.—Some emaciation and some rigidity. Depending parts livid. Slough on sacrum as before.

Abdomen moderately full. Numerous sudamina on surface, very large and transparent: none on neck, nor on thorax.

Head.—Some serous effusion in cavity of arachnoid, some in pia mater over upper and back part of hemispheres, and a large quantity at base of brain. Longitudinal sinus and veins of pia mater moderately full of blood. Glands of Pacchioni very large. Brain firm. Bloody points rather numerous. Quantity of serum in lateral ventricles more than usual. Two or three small serous cysts in plexus choroides. This cavity not examined until an hour after thorax.

Thorax.—Left pleura healthy. Right contained about five ounces of serum, and a portion of recent lymph hanging from lower lobe. Some redness on diaphragm.

Lungs.—Both lower lobes engorged, friable, and showing throughout, on the cut surfaces, dark red, almost ecchymosed spots : otherwise healthy : so also the epiglottis, larynx and trachea. *Pericardium* contained 1½ ounces serum. *Heart* healthy. Considerable quantity of fibrin in right ventricle. Blood otherwise, dark colored and liquid, but not unusually so.

Abdomen.—*Peritoneum* almost every where showed marks of acute inflammation. Cavity contained thirty-eight ounces of limpid serum. *Small intestine* glued together by thin interposed layers of light colored, recent lymph, most abundant towards right side, where also was effused much of the contents of the intestine. A large quantity of lymph on convex surface of liver, and corresponding surface of diaphragm. None on stomach except to-

wards small curvature, and generally none on the small intestine opposite mesentery, though there was considerable redness of the surface. *Stomach* distended with flatus, contained about four ounces of bright yellow, rather thick liquid. Mucous membrane healthy. *Small intestine* not contracted: contained much light yellow, thin fluid in upper part, and a considerable quantity of a soft solid matter, light yellow, looking like curdled milk partly digested: such as this it was which was found in the peritoneal cavity. *Peyer's glands* diseased, but not so remarkably diseased towards termination of ileum, as is often the case. About seventeen counted, in a state of ulceration. Ulcers average two or three lines in diameter, well defined, edges red and considerably raised, from thickening of the subjacent cellular coat: muscular fibres generally exposed. One of the ulcers had penetrated through the peritoneum. It was situated 7½ feet from the cœcum, more than half an inch long, from one to two lines broad, and ran transversely to the course of the intestine. The perforation was circular, about 1½ lines in diameter, edges very sharp, and peritoneal surface, for some distance around, covered with lymph. Some of the patches were quite healthy, except for the ulceration: but, generally, they were more or less irregularly thickened, red and softened. Many other smaller ulcerations were found, not in Peyer's glands, being generally more superficial, much less thickened, the edges of some very dark, almost black: a few, how-

ever, were more recent, of a bright red color, and considerably thickened. One of these, the first ulcer met with, was situated twelve feet from the pylorus. *Brunner's glands* visible throughout last eight feet of this intestine, especially numerous towards cœcum, where they weretransparent, and about the size of a turnip seed. Mucous membrane, generally, sufficiently healthy, and Peyer's glands, in upper part of intestine, quite so. *Mesenteric glands* opposite lower end of ileum greatly diseased. Several as large as a filbert, soft, of a mixed whitish and deepred color externally, and being cut through, were found to be extensively suppurated. Those corresponding to upper part of canal gradually became healthy.

Large intestine.—Much contracted: contained a very little healthy excrement. Five or six small, dark colored ulcers in cœcum, most of them not thickened, quite superficial: but two or three penetrated to muscular coat; mucous membrane otherwise well. *Liver* rather friable: bile abundant, quite thin. *Pancreas* healthy. *Spleen* 6 inches long, 4½ broad, soft and of a deep red color. *Kidneys* dark colored, congested and rather friable. *Bladder* not contracted; many small red spots on inner surface toward neck; contained about eight ounces of urine.

CASE VII.

Typhoid fever with pneumonitis admitted at the end of the sixth week; fatal in the eighth. Diagnosis confirmed by examination post mortem.

McD., æt. twenty-six, laborer, an Irishman, was admitted August 22, 1834. By his imperfect account he was taken sick six weeks ago. He was then at sea and was attending some passengers, who were sick. At first cough, chills, heat and sweat, with much prostration, but with little pain; these symptoms have continued, keeping him in bed from the first; diarrhœa in the early part, but not of late; he thinks he has been mending of late.

When admitted, his state was as follows: Tongue coated, rather dry, but cleaning at edges; no dejection since yesterday; abdomen not tender; several red spots; has just now vomited a green liquid; P. 120, rather hard, not very small; skin moist; temperature natural; eyes heavy; coughs often;—chest resounds well anteriorly; some flatness below scapulæ; respiration audible anteriorly, not purely vesicular; some sonorous rale in left breast; on back, below right scapula crepitous rale, below left scapula bronchial respiration.

Enema.

August 23, P. 96, small, not hard; skin cooler than natural; lips sublivid; respiration long and deep; no thirst.

To August 28th (the end of 7th week by his account), sleepy and stupid for the most part; at times

active delirium, yet he could be roused to answer questions; P. 108 to 120, with double beat; cough loud and strong, sometimes annoying, without expectoration, though with a sound of loose mucus in throat; brighter and some relief to cough after leeches on temple, August 25th; tongue dry and crusted; bowels kept open by medicine and injections; countenance getting yellow, or sallow.

August 29th, dejections and urine involuntary; tongue moist for the first time and swollen.

August 30th, tongue black; P. 132. August 31, P. 136; more awake, yet not noticing objects about him. At 4 P. M., stupor increased. September 1st, evidently sinking. Died at 5 P. M.

Besides the enemata and leeches which have been mentioned, he had Pil. Scill. C. night and morning, August 22d, and Pil. Hydr. Subm. C. night and morning, 23d and 24th. Also was vesicated on the neck, August 29th.

AUTOPSY.

Lungs.—Lower left lobe in first stage of inflammation.

Small intestine.—Ulcerations large and frequent; twenty-five counted; edges much elevated, for most part round; penetrating in some places to peritoneum. About six inches above valve, a patch of Peyer's glands deeply ulcerated. Valve of cœcum very much swollen; one large ulcer near it. Mucous membrane, for space of six inches above this part, thickened. *Mesenteric glands* much enlarged, very hard and red. Brunner's glands much developed.

Liver.—Very hard, firm. Stomach much thickened and corrugated. Mucous membrane thickened and soft. Some fluid in peritoneal cavity. Spleen very large; three times its natural size. Firm externally, but, being cut into, of the color and consistence of cranberry jelly.

The early history might leave a doubt as to the diagnosis; I mean the written history. But if every thing had been recorded, which was seen, there would not probably be any doubt. The subsequent course of the disease, and the appearances post mortem, remove all doubt in the case. It is to be regretted, that the appearances post mortem are not more fully and exactly detailed.

Effects of remedies.—It might be fairly anticipated that the period of the disease, at which remedies are employed, would have a great influence on the results. The anticipation is confirmed by experience. In stating the effects of remedies, therefore, I shall mention, first, those who entered the hospital the first week of the disease, and to whom medicine was first administered in that week. I shall not distinguish those, in whom the treatment was commenced before admission to the hospital. It will be enough to say, generally, that in those the benefit was decidedly less, *cæteris paribus*, than in those, who were treated solely in the hospital. This is in accordance with what has been before stated; and shows that the care, which was taken of patients in the hospital, independent of medicine, was conducive both to safety and to early recovery.

It is impossible to decide positively, from these cases, the effect of any one remedy; because in almost all cases various remedies were used. These were directed with reference to the violence of the disease, or to that of particular symptoms. When, therefore, the results are stated in cases, where emetics, or mercurials, or any other remedies were employed, it will be understood, that these were not the only remedies, and that, except in the particulars stated, the cases were treated variously. Yet by taking, for instance, all the cases, where emetics were employed, some judgment of their influence may be formed.

Emetics.—There were 90 patients, who entered in the first week of the disease; of these 59 took emetics in that week, among whom four died, *i. e.*, 1 in 14.75; and 31 did not take emetics that week; of these last, 3 died, or 1 in 10.33.

Among those who entered the first week, then, 7 died, and 83 recovered. Among these 83 the average day of convalescence was the 17.42 day; in the 55 who took emetics and recovered, the average day was 17.29; and in the 28 who did not take emetics and recovered, the average day was 17.67. Hence, it appears that there was not any material advantage as to the period of convalescence in those who took emetics. But the favorable effect on the fatality of the disease was much more marked. If, however, we look more closely to the cases under consideration, we find reason to believe that an emetic, on either of the first three days of the disease, is much

more beneficial than if taken on either of the four following days, for it appears that 32 took emetics on the first three days (9 on the first, 10 on the second, and 13 on the third), of whom one only died; and that the average day of convalescence, in the 31 who recovered, was 15.61. And there was a regular progress in this; for among those who took an emetic on the first day of disease, the average day of convalescence was 14.66; for those on the second, it was 15.32; for those on the third, it was 16.46. On the other hand, there were 27 who took emetics on the fourth, fifth, sixth, and seventh days of the disease, and entered the first week; of these 3 died, or 1 in 9; and of the 24 who recovered, the average day of convalescence was 19.45. It should be observed here, that the emetics were taken before entering the hospital, in 24 of the 32, who took them on the first three days; and that 17 of these 32 entered on the last four days of the week; so that, in these respects, they had not the fullest share of careful attention. Of the 27, who took emetics on the last four days of the week, 15 took them before admission. All of them (the 27) entered on the last four days of the week. The three who died, were among the 15 who took emetics before entering the hospital.

One hundred and thirty-nine patients entered in the second week of the disease. Of these, 91 took emetics, either before, or after admission. In the whole number, 16 died, or (139÷16=8.68) 1 in 8.68. Of those who took emetics, 9 died, or (91÷9=10.11) 1 in 10.11. There were 48 who did not take emetics;

and of these, 7 died, or (48÷7=6.85) 1 in 6.85. The difference in this case is somewhat greater than between those who did, and those who did not take emetics in the first week.

Among those, who entered the second week and recovered (139–16=123), the average day of convalescence was 21.21. Of these, 82 took emetics and recovered, and among these the average day of convalescence was 21.41; and 41 did not take emetics, among whom the average day of convalescence was 20.85. So that among those, who entered the second week and recovered, the convalescence was later, where emetics were administered, than where they were not.

In the first two weeks together, 150 entered and took emetics; of these 13 died, or 1 in 11.53. In the same time 80 entered and did not take emetics; of these 10 died, or 1 in 8.

In the years 1822 to 1831 inclusive, emetics were used much more frequently than afterwards, particularly in the second week. In 1822 to 1831, there were 174 cases; in 1832 to 1835, there were 129 cases. Now in the first period, there were 32, who had emetics, of those admitted the first week of disease, and 60 of those admitted the second week. In the last period, there were 27, who had emetics of the first week and 31 of the second week. In the first period, there were 20 fatal cases, or (174÷20=8.7) 1 in 8.7; and in the second period, there were 22 deaths, or (129÷22=5.8) 1 in 5.8.

It must be noted, however, that other active rem-

edies, as well as emetics, were used much less frequently in the last period than in the first, except only antimonials. It will be seen that these did not add to the number of fatal cases; but, as far as the evidence goes, that they lessened this number.

Cathartics.—In almost every case, cathartics were administered, both at an early period and afterwards. In the very few cases where they were not used, there were peculiar circumstances influencing the practice; so that no just inference can be drawn from a comparison of the cases, in which they were, and of those where they were not used.

Blood-letting.—Venesection, cupping and leeches were employed in many cases; but always with reference to particular symptoms, and not as remedies for the disease independent of the predominance of certain symptoms. Venesection, especially, was not employed, or very rarely employed, except when the case appeared hazardous from the general violence of the symptoms, or from some local affection.

Venesection was practised in the first week in 27 cases among those, who entered that week; and 6 of these cases proved fatal, or (27÷6=4.50) 1 in 4.50. It was rarely repeated, and the quantity of blood taken was usually a pint, being from 12 to 24 ounces; but most commonly 14, 16, or 18 ounces. In 13 of these 27 cases, local bleeding, by cupping, or leeches, was also employed. Of the 6, who died, 1 entered on the 3d day, 3 on the 5th, 1 on the 6th, and 1 on the 7th day. Of the 21, who recovered, 2 entered the 1st day, 1 on the 2d, 2 on the 3d, 3 on the 4th,

3 on the 5th, 7 on the 6th, and 3 on the 7th day. Of the whole number of patients (303÷27=11.54), 1 in 11.54 was bled by venesection. There were 13 patients who were cupped, or leeched, but in whom a vein was not opened. Of these none died. Of the 34, who were bled in some way, and recovered, the average day of convalescence was 18.38. Of the 21, in whom a vein was opened, and who recovered, the average day of convalescence was 19.19. But as all the cases, in which bleeding was employed, were picked cases, no fair inference can be formed by comparing the results with the other cases.

Among those, who entered the 2d week, venesection was practised in 22 cases, of which 5 proved fatal, or (22÷5=4.40) 1 in 4.40. This is almost the same proportion as in those of the 1st week. Among the same, local bleeding only was employed in 40; of these 4 died, or (40÷4=10) 1 in 10. Of the whole, bled in any way, viz., 62, 9 died; or (62÷9=6.88) 1 in 6.88. The average day of convalescence in all, who were bled in any way and recovered, was 21.24. This was more than 3 days later than in those, who entered the first week, but otherwise similarly treated.

If this statement appear, at first sight, unfavorable to venesection, it must be remembered that the cases, in which that was practised were uniformly of a bad character.

Mercurials used efficiently.—Mercurials, almost solely the submuriate of mercury, were used in a large proportion of all the cases. They were used

sometimes in combination with emetics, and very frequently with cathartics. Likewise they were given in small doses in some cases, but from some change in the state of disease, or from some inconvenient effect of the medicine, they were soon discontinued, and that before they had produced any marked effect on the general system. In such cases the mercurials were not considered as having been used efficiently. The cases, in which they were considered as having been so used, were those, in which the mouth was made sore, or in which there was other reason to believe the system had been affected, or in which at least, the mercurials had been used long enough to have had an effect. In the very great majority of these cases, the sore mouth was the test of the efficient use of the remedy.

Among those, who entered the 1st week, 18 used mercurials efficiently; of these 14 had sore mouths and 4 had not. Thus, as the whole number, who entered the 1st week of the disease, was 90 (90÷18=5), 1 in 5 used mercurials efficiently. Of the 18 above described, 3 died, or 1 in 6. Of those, who had sore mouths (14), 2 died, or 1 in 7. Of those, who had not sore mouths (4), 1 died, or 1 in 4. The average day of convalescence was, in all of the 18 who recovered (15), 19.60; in those, whose mouths were sore (12), 19.41; in those, whose mouths were not sore (3), 20.33.

Among those, who entered the 2d week, 37 used mercurials efficiently; as the whole number who entered that week was 139 (139÷37=3.75), 1 in

3.75 used mercurials efficiently. Of the 37 above described, 4 died, or 1 in 9.25. The average day of convalescence, in the 33 who recovered, was 20.72. All these 37 cases, except one, occurred before the year 1831.

The result, as to those of the first week, is less favorable than in the whole number, both as to fatality and as to the period of convalescence; as to those of the second week, it is more favorable in both respects. If we recollect that in the mildest cases, mercurials were less used, we may infer that probably they had no great influence on the results.

Antimonials used efficiently.—Among those who entered in the 1st week of the disease (90), 20 used antimonials efficiently, and all recovered. In them the average day of convalescence was 19.10; while the average day of convalescence in all who recovered was 17.42. So that if the medicine had some effect in preventing a fatal termination, as this limited experiment would seem to show, it had not any in hastening convalescence.

Among those, who entered the second week (139), 22 took antimonials efficiently; of these, two died, or (22÷2=11), 1 in 11. In the 20 who recovered, the average day of convalescence was 21.30; while the average day of all, who recovered (123), among those who entered the 2d week, was 21.21. Here again the fatality was less among those, who used the antimonials, than with others; but the period of convalescence was a very little later. Those of the first and second week together, who used antimonials

in 1822 to 1831 inclusive, were twenty in number, being 1 in 8.70 of all who entered in those weeks; those who used the same in 1832 to 1835, were 22, or 1 in 5.86 of all who entered in the first two weeks. Thus, then, antimonials were used more frequently during the years of the greatest fatality, than during those of the least fatality. Yet in 42 who used them, only 2 died, or 1 in 22; while the deaths in those who did not use them, among those of the same weeks, were in the proportion of 1 in less than 9.

But perhaps this would lead to too favorable an opinion of the benefit of antimony. For the cases in which it was used were picked cases. That is, they were not, on the one hand, very mild cases; but, on the other, they were not, generally, those which presented the most formidable features, such as severe cerebral symptoms.

Here is another view of the effect of remedies. I find that of all (90), who entered in the first week of disease, 27 (nearly one third) were convalescent on the 14th day or earlier; viz., from the 4th to the 14th day, and on an average a little short of the 10th day. All of these were treated early and actively. For, first, the treatment was commenced in five on the first day of the disease, in nine on the second, in seven on the third, in two on the fourth, in three on the fifth, and in one on the sixth day. Second, in fifteen cases, the treatment commenced with an emetic, and in four others an emetic was given after a cathartic; in twelve cases the treatment commenced with an active cathartic, and in the

other fifteen cases a cathartic was given after the emetic, and at an early day. In six cases, venesection was performed at an early day, *i. e.*, from the 1st to the 4th day of the disease.

This statement of selected cases is not full evidence of the benefit of active treatment at an early period; but it surely is not without much weight. At least, it shows that none were convalescent very early, who were not treated actively at an early period.

There would not be any advantage in stating the treatment of those, who entered in the 3d week of the disease and later. In some of these, the treatment was commenced early, and was judicious; but the circumstances, under which the patients were placed, were so unfavorable until a late period of disease, that the benefit of the medicinal remedies was counteracted. In some the treatment was very injudicious, and in some there was not any medical treatment. Empirical remedies were used in a few cases with decided injury, when those were of a violent kind.

Opium was used in a large proportion of all the cases, but in very various doses. It was used to check diarrhœa and cough, to procure sleep and to alleviate pain. It would not be possible, however, to estimate its effects with any fairness, without going into the details of very many cases. That it was often beneficial, I have no doubt; but this was principally when given in small doses.

Somewhat similar must be my remarks respecting

vesication; that is, the effects cannot well be decided without entering into many details. In relieving pain it was certainly beneficial in many cases, except perhaps for pain in the head, in the early period of the disease. But, from the whole effects, I have been induced to use it less and less frequently for several years past.

In reviewing the statements, which have been made in respect to treatment, we may, I think, adopt the following conclusions; at least, we may adopt them, as rendered probably just, and as worthy to guide us in future efforts for the welfare of those, affected with the typhoid, or continued fever of New England.

First, that on the attack of this disease, the patient should immediately desist from labor and mental exertion, abstain from food, except of the simplest liquid food, and place himself in bed, or, at least, in a state of repose.

Second, that free evacuations should be made at the beginning, and that in doing this, a day is important. It is better that they be made the first day than the second, better on the second than the third; but that it is especially important that they should be made as early, as the third day. That an emetic of tartarized antimony should first be given, and then an active cathartic, or the two in combination. If there is constipation at the time, an active enema, given at first to disembarrass the bowels, would no doubt facilitate the action of an emetic. If the vomiting and purging are not followed by great relief, venesection should be practised on the following day,

unless the constitution should be very feeble, or the case very mild.

Third, if the disease has not subsided after the evacuations, tartarized antimony should be given every two hours in increasing doses, after the method of Odier before mentioned. Meanwhile, the bowels should be kept open, and, for two or three of the first days, it would be well that calomel should enter into the medicine used for this purpose; not, however, giving more than one moderate dose in a day. It should be noted, however, that, usually, after the antimony has been given for forty-eight hours, this will act sufficiently on the bowels, and that sometimes it must be restrained by opium.

Fourth, that, when the disease subsides early under any active treatment, it is quite essential that the patient should be restrained from solid food for two or three days, at least, after he has an appetite for it; and that he then use only vegetable food in small quantities, for two or three days more. Likewise that he should not be allowed to make any efforts of either body or mind, until his convalescence is fully established. By this it is not intended that he should be confined wholly in bed, but that he should be confined to his chamber, and not allowed to talk on business, nor on any interesting subject.

Fifth, that evacuations, vomiting and purging at least, may be resorted to with advantage in the second week; and that perhaps some benefit may be obtained from antimony in small doses, when commenced in that week. But that, after that period,

no active treatment should be employed, or none which will cause any serious inconvenience to the patient.

The remarks under the following heads are offered as the result of my experience, as it remains in my mind; but not as deductions made according to the numerical method.

Sixth,—as to diet. There is no point, probably, on which all practitioners are more agreed, than that food should be withheld from persons affected with this disease in its early period, except only the mildest, or most bland, liquid articles. Probably food would be injurious in its early period, at least, if it could be digested. But it cannot be digested perfectly, and often not at all, and that alone should forbid the use of it. When the disease is arrested or mitigated by treatment, it is very certain that an indulgence in the use of food is most commonly injurious, and that the cautions already stated, are not too severe. When, however, the patient is fully reinstated, he must be allowed some extra food for the recovery of his flesh and strength. This must be done cautiously; but an extreme and protracted abstinence is injurious. When the disease runs its usual course, and the appetite for food returns, is there any danger in the indulgence of it? To this question I answer, in proportion as the return of appetite takes place early, more caution is necessary. If it takes place at, or about the end of the third week of the disease, if it is decided, and if it is accompanied by a cleaning of the tongue, almost any

article, which the patient craves, may be allowed him with safety. The appetite is usually a sufficient guide as to the quality of the food; but not as to quantity. In a large proportion of cases it will be found a most uncertain guide, as to quantity. Hence it is necessary to begin with small quantities, and to increase gradually. It is equally necessary to make the intervals long between the portions of solid food, which are given in the early period of convalescence. At first, there should be one portion of solid food in the day; the next day, if every thing is favorable, two portions, with five or six hours between them; and two or three days later, watching the effects, three meals may be allowed. But we are not merely to feel the pulse under these circumstances, to see if the fever has increased. The danger is not, I apprehend, that the system will be too suddenly nourished. It is that the enfeebled organs of digestion may not be able to digest the food. We must therefore watch all the signs, which refer to those organs. Only, if the head should ache, or other organs be disturbed, we should remember that the prominent signs of indigestion are often shown elsewhere than in the stomach, and stop the food till it appears whether this is not now the case. It is also to be constantly remembered, that constipation of the bowels will be followed by indigestion, and that evil must therefore be guarded against.

Seventh, cordials. On this, as under the last head, I must give the convictions, arising from the most careful observations I have been able to make

in many years. I cannot adopt the more accurate mode of the numerical system. Nor in this case could this system be usefully followed, unless with the greatest attention to the state of each case. It has appeared to me that we should not adopt the rule to give cordials, nor to withhold them, in every case. When a patient is induced to take cordials reluctantly, they seldom benefit him, and are often followed by injury. When he is greatly enfeebled, at a late stage of the disease, he may be safely asked if he wishes for them, and if he does, he may try them; they will seldom hurt him then, if he takes no more than is grateful to him. When he spontaneously demands them, as late as the third week, they will almost always be found useful. Now, in following these rules, I have occasionally found a patient, who would take a large quantity of some cordial liquor. But this has been rare. Few take them longer than two or three days, and the majority of patients do not take them at all. It is proper to add that by cordials I mean vinous liquors. I have most commonly found cider grateful in the first instance, beginning with an ounce two, or three times a day, and increasing according to the effects. Sound beer, or ale is more rarely, but sometimes grateful. In patients much exhausted, however, the strong foreign wines, Sherry, Port and Madeira are found most useful. These articles may be diluted, or may be employed to season articles of diet, or may be given alone, according to the taste of the patient.

In conclusion, I will indulge the hope that this

report will be of some use to my brethren. It has cost an amount of labor to arrive at its details, which could hardly be credited by one, who never engaged in a similar work. There is one benefit, at least, which may be derived from it by those, who seek to promote science. They may learn from its defects how much may be gained by making their observations full and exact in the first instance. This will be best effected by fixing in their minds all the questions, which a strict inquiry after truth, may call on them to answer in respect to each case.

ARTICLE V.

ON THE

TREATMENT OF DELIRIUM TREMENS,

BEING AN APPENDIX TO AN ESSAY ON THIS DISEASE, PUBLISHED IN VOLUME V.

By JOHN WARE, M. D.

In some remarks on delirium tremens, which were published among the Communications of the Massachusetts Medical Society, a few years since, and which were founded exclusively on cases which had occurred under my own observation, I expressed the opinion, that this disease was not capable of being arrested in its course by treatment,—that the paroxysm of watchfulness and delirium was not shortened by remedies, but would continue a certain time, and then arrive at a spontaneous termination, either in death or recovery,—and that opium, so far from exercising, as many have supposed, a favorable influence on the event, served rather to increase than diminish the mortality.

The opinions then expressed, were not founded upon any strict or analytical examination of the cases referred to, but were simply the result of the general impressions which are left upon the mind of the prac-

titioner, by the observation of disease, as it presents itself in the routine of ordinary practice. I am fully sensible of the cautious reliance which should be placed on results which have been thus obtained, and it seemed, therefore, desirable to inquire how far these opinions would be confirmed by a more strict examination of the cases on which they were founded.

Such an inquiry has accordingly been made, and the results I now lay before the Society. Since the publication of the paper alluded to, a few cases of delirium tremens have fallen under my care, and these have been included in the examination. Other cases, on the contrary, which were then referred to, have been now rejected. The objects of that paper embraced a general history of this peculiar delirium, whether occurring in a distinct paroxysm or only as a transient symptom in the course of other diseases. I have now only included those cases in which the delirium presented itself in the form of a regular paroxysm. I have also excluded 31 cases, which occurred under my care at the Boston almshouse, as I have no notes of their history or treatment, but merely of the event of each case.

The number of cases in private practice was 69, occurring during a period of about 20 years. Of these cases, 63 occurred among males, and 6 among females. The whole number of deaths was 11,—all the fatal cases were of males. Of 31 cases, at the almshouse, 5 were fatal. The ratio of mortality in all the cases was thus very nearly the same.

1. Eight cases were treated by *large doses* of opium, given with the intention of bringing about a termination of the paroxysm by sleep. The quantity administered varied, in different cases, from 24 to 72 grains, and it was usually given in the course of 48 hours. Four of these cases proved fatal. One died after sleep had been procured; the patient never awaking after the full effect of the remedy had been produced, but expiring in a state of coma. The remaining 3 died without having slept. Neither of these 8 patients were bled. One of them was the subject of a severe acute disease, dysentery, in the course of which delirium supervened; this was a fatal case. The others, so far as could be ascertained, labored only under such general symptoms of disorder as are common to those made sick by intemperance, or some such chronic ailment as is frequent among persons of those habits, and could not be supposed to influence the course or event of the delirium. In the cases which recovered, restoration to health took place speedily and completely after sleep had taken place.

2. Seven cases were treated by *small doses* of opium, or opium given in such manner and quantity as not to have a distinct and powerful influence in the procuring of sleep, the quantity not exceeding 2 or 3 grains in 24 hours. Two of these patients died, both without having slept. One was laboring under severe peripneumony when attacked by delirium tremens;—this case was fatal. One patient was bled, and this was one of the favorable cases.

3. Twelve cases were treated principally by repeated and continued vomiting, according to the mode of practice recommended by Dr. Klapp, of Philadelphia. Tartarized antimony was chiefly relied on for this purpose, but in a few cases the sulphate of copper and ipecacuanha were substituted, with no apparent difference in the effects of the treatment. Two of these patients labored under severe disease, one of the brain, and one of the cellular membrane around the knee-joint. The former died, the latter recovered. One patient was bled, and this recovered. Of the whole number, 1 died.

4. In 2 patients, a single copious bleeding from the arm was the only remedy employed, and in both the disease speedily gave way.

5. In 9 cases, the mode of practice was what may be termed, for convenience of distinction, eclectic. The treatment was adapted to the prominent symptoms in each patient, having regard, in its application, rather to the general character of the case and the indications of derangement in particular organs, than to the presence of the peculiar affection of the brain which constitutes delirium tremens. Of course, a large proportion, 7, of these cases were decided cases of acute local disease, and were treated by the usual remedies. Five of the 9 were bled; and of these, 2 died. Of the whole 9, 3 died, all of them being cases of peripneumony.

6. One case, in which the delirium accompanied erysipelas of the face and head, was treated by large doses of the sulphate of quinine. This recovered.

7. One case was treated by mercurials,—salivation occurred, and the patient recovered.

8. In 29 cases, the mode of treatment was what may be properly denominated expectant. It is not intended to imply, however, that no remedies were administered. At the commencement of many of them, active measures were employed for a short period. Thus some were bled, some leeched, to some an emetic was given, several were blistered upon the neck, and all were more or less subjected to the operation of cathartics. Besides these remedies at the outset, various articles were administered in the course of the several cases, but usually of an inefficacious character, or in such doses as probably to have had no influence on the course of the disease. For example, small doses of Spir. æther nit., Ammon. acet., liq. Tinct. hyoscyam., Ext. conii., Tinct. humuli, Tinct. valerian, Tinct. assafœtid., and various other medicines, were administered, but from the amount and efficacy of the substances thus taken, no physician, acquainted with their power, would for a moment suppose them to have had any control over the disease.

All these cases were free from combination with acute disease, with one exception; in this there was inflammation of the arachnoid membrane of the brain, as determined by dissection. This was fatal. Four patients were bled, and all of them recovered. Of the whole number 29, 1 died.

The results of the different methods of treatment will be more readily compared, if they are thrown together into a tabular form:

Treatment.	Number of cases.	Bled.	Died.	Recovered.	Complicated with acute disease.
Opium, large doses,	8		4	4	1
" small, "	7	1	2	5	1
Emetics,	12	1	1	11	2
Bleeding,	2	2		2	
Eclectic,	9	5	3	6	7
Quinine,	1			1	1
Mercurials,	1			1	
Expectant,	29	4	1	28	1
	69	13	11	58	13

It appears from this statement, that of 15 cases in which opium constituted the principal remedy, 6 died; whilst of 54 in which opium was not used at all, or only incidentally and in small quantities, only 5 died. Still further, if we separate from these 54, the 9 cases in which the treatment was eclectic, and in which the mortality seems to have arisen from the combination of acute disease, we have a remainder of 45 cases, of which only 2 were fatal. Again, if we compare the mortality of those cases in which opium was pushed to the full extent advised by writers on this disease, with those in which no active remedy was employed, we have a mortality of 1 in 2, against a mortality of only 1 in 29.

This difference in the results of treatment would seem altogether too great to be attributed to accident, and goes far to establish the truth of the opinion formerly expressed, that opium given in large doses is actually injurious to patients laboring under delirum tremens. But even admitting it to be possible, that the great proportion of fatal cases occurring where opium was used, was accidental, it certainly, I think, will not be contended, that the favorable termination of the cases not treated by opium, was also owing to

accident. And it will certainly follow, that opium, if not absolutely injurious to these patients, is at least useless, and that our success in this disease will be sufficiently satisfactory without it.

The examination which has been made of these cases, has led me to the notice of some other circumstances relating to the history and treatment of delirium tremens, which it may be worth while to record.

And first, it appears, that a case of this disease is not often fatal, unless some other affection is present, which is in itself dangerous, and liable, even without its complication with delirium tremens, to prove fatal. Of the 11 fatal cases above recorded, 7 or 8 were of this character. It is not, however, always in our power to be certain of the existence of such a combination, since the effect of the delirium is to absorb or overshadow whatever other affection may coexist, and thus to obscure its symptoms and prevent us from recognising its presence. It may have been possible, therefore, that in the other fatal cases where no such combination was apparent, it may have existed. But it is still worthy of remark, that of the fatal cases occurring among patients who were presumed to be free from any such combination, 2, if not 3, were of those who were subjected to the full opium practice.

2. In three of the fatal cases, death took place after the patient had slept. We have been taught to rely on the occurrence of sleep as a pretty certain indication of a favorable termination. It would appear, however, that to this indication there are many

exceptions. Neither is the occurrence of sleep in favorable cases always followed by a termination of the paroxysm. Eight patients slept more or less during the continuance of the disease; awaking to exhibit all the symptoms which had previously existed.

3. Convulsions have been considered an unfavorable symptom in delirium tremens; but of 9 patients in whom they occurred, only 2 were among the fatal cases. I will not assert positively, that all the instances in which they took place were noted, yet I do not think they were often omitted. Especially it is probable, that they were not overlooked in the fatal cases. Hence, if there be any error, it is one which would diminish rather than increase the ratio of mortality among the cases presenting this symptom.

4. General blood-letting has been usually regarded as inadmissible in the treatment of delirium tremens, and is, by some, thought highly injurious. Thirteen patients were bled from the arm, at some period in the course of their disease. Of these, only 2 died, and these were both affected by peripneumony. This would seem, at least, to show, that bleeding is not a dangerous remedy, since the cases in which it was employed were principally those in which there was a combination of some acute disease with the delirium; in which class of cases, as already observed, very much greater danger exists than in those in which the delirium is uncombined.

Boston, April, 1838.